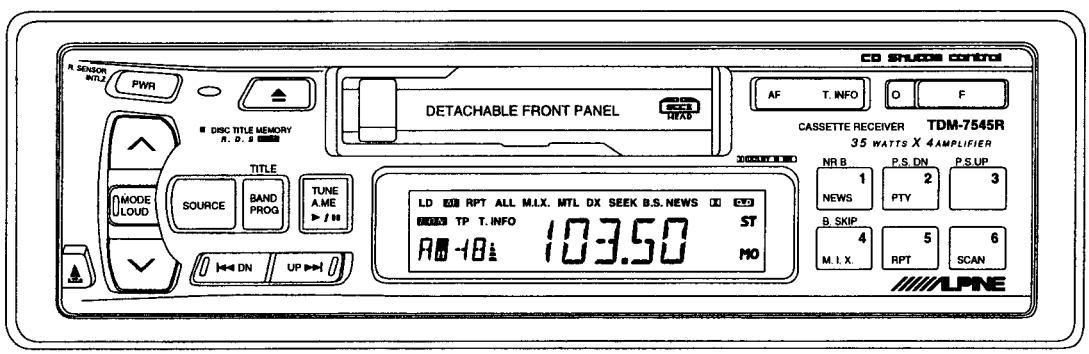
ALPINE®

SERVICE MANUAL

FM/MW/LW/RDS Cassette Receiver

CD Shuttle Controller

- For the cassette deck mechanism parts (GR75S310/410) of this model, refer to the Service Manual • GR-S SERIES • ADDENDUM & REVISED (II) (Part No. 68E24873S01/68E26177S01).



(TDM-7545R)

TDM-7545R/ TDM-7544R

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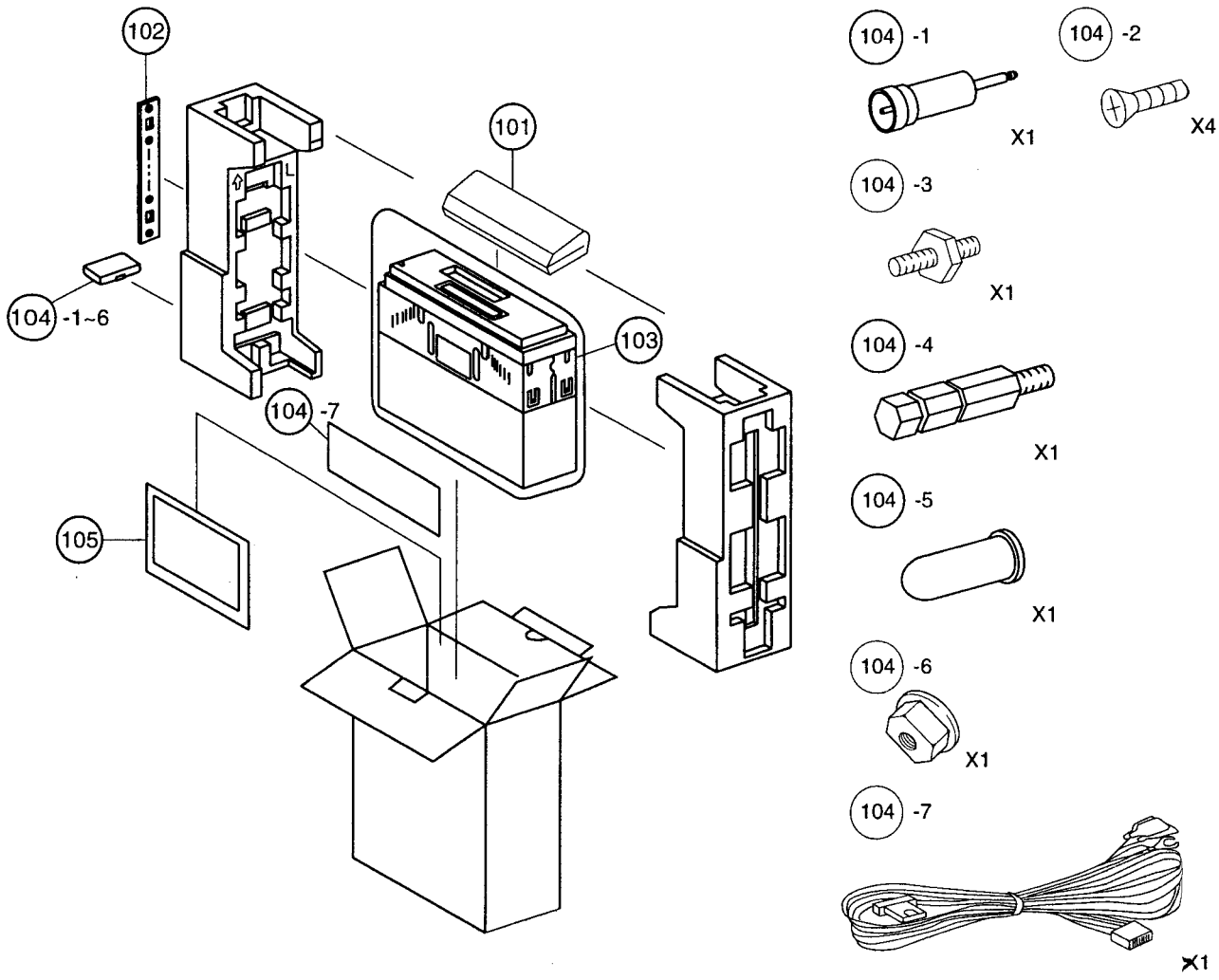
Packing Assembly Parts List

Symbol No.	Part No.	Description
	101	15D71506W01	Carrying, Case
	102	07E09438S01	Bracket, Strap Receiver
	103	15E21170S01	Case, Inner
○	104	01E27625S01	Assy., Kit Installation
△	104	01E27737S01	Assy., Kit Installation
	104-1	01T15394Y02	Antenna, JASO-ISO
	104-2	03E10240S02	Screw, MCH (M5X8)
	104-3	03E11374S01	Stud, Bolt
	104-4	03E27739S01	Bolt, Hex. (M5)
	104-5	75E27734S01	Cap, Rubber

Symbol No.	Part No.	Description
104-6	02E20771S01	Nut, Hex. (M5)
104-7	01E27452S01	Assy., Power Wire (For Battery Line (Fuse 15A))
105-1	68P91666W52	Owner's Manual
105-2	68P91666W53	Owner's Manual (I/G/S)

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

Packing Method View



Specifications

FM RADIO

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Mono, 30dB S/N, at 98.1MHz)	17.2dBf
-3dB Limiting Sensitivity (at 98.1MHz)	19.2dBf
Residual Noise (Ref. 400Hz, at 98.1MHz)	25±10dB
S/N Ratio (Stereo, at 98.1MHz)	55dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 60dB μ, at 98.1MHz)	1%
Frequency Response (Ref. 400Hz, at 98.1MHz)	100Hz : 0±3dB
	10kHz : -12±3dB
Stereo Separation (1kHz, at 98.1MHz)	20dB
PS Sensitivity (at 98.1MHz)	36.2dBf

MW RADIO

Intermediate Frequency	450kHz
Frequency Range	531~1,602kHz
Usable Sensitivity (20dB S/N, at 999kHz)	35dB
S/N Ratio (at 999kHz)	44dB
Image Rejection (at 603kHz)	40dB
IF Rejection (at 603kHz)	40dB
Distortion (at 999kHz)	1.5%
Frequency Response (Ref. 400Hz, at 999kHz)	100Hz : -3±4dB
	4kHz : -12+6, -12dB

LW RADIO

Intermediate Frequency	450kHz
Frequency Range	153~281kHz
Usable Sensitivity (20dB S/N, at 216kHz)	41dB
S/N Ratio (at 216kHz)	42dB
Image Rejection (at 270kHz)	40dB
IF Rejection (at 162kHz)	50dB
Distortion (at 216kHz)	1.5%
Frequency Response (Ref. 400Hz, at 216kHz)	100Hz : -3±4dB
	4kHz : -12+6, -12dB

TAPE PLAYER

Wow & Flutter (JIS, WRMS/MTT-111N)	0.2%
Tape Speed (MTT-111N)	4.76cm/sec.+3 to -1%
S/N Ratio	Dolby OFF : 52dB
	Dolby B NR : 60.5dB (○)
Distortion (MTT-118)	2%
Frequency Response (-3dB)	250Hz~10kHz
Separation (MTT-141N)	35dB
Crosstalk (MTT-121N)	45dB

GENERAL

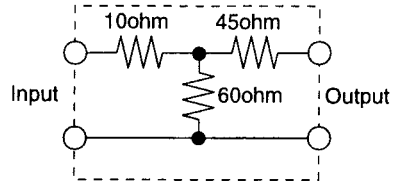
Power Supply	DC14.4V
Power Output (T.H.D. 10%) /Impedance	16W/ch/4ohm
Semiconductors	22IC's, 42Transistors, 19Diodes, 7Zener Diodes (○)
	17IC's, 36Transistors, 18Diodes, 7Zener Diodes (△)
Dimensions (W×H×D)	Chassis : 180×50×155mm
	Nose : 188×58×19.4mm
Weight	1.4kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.
○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others :Common.

Adjustment Procedures

1. FM SECTION

(1) Dummy Antenna Circuit



For 50 ohm FM Signal Generator

Figure 1

(2) Connections

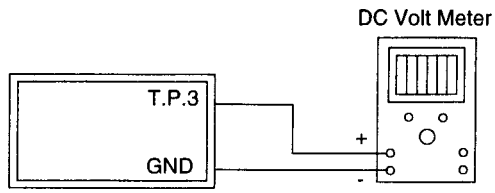


Figure 2

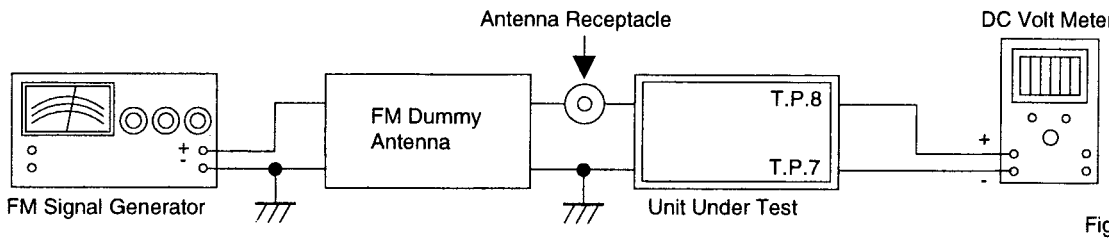


Figure 3

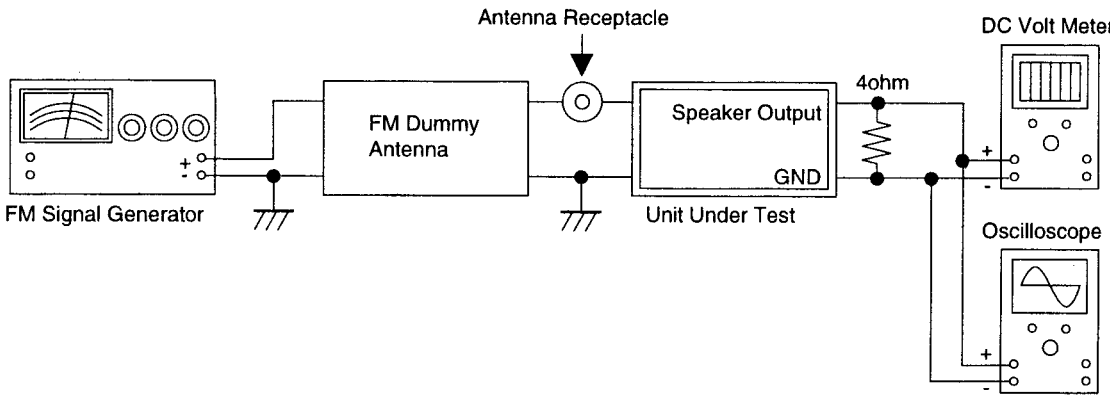


Figure 4

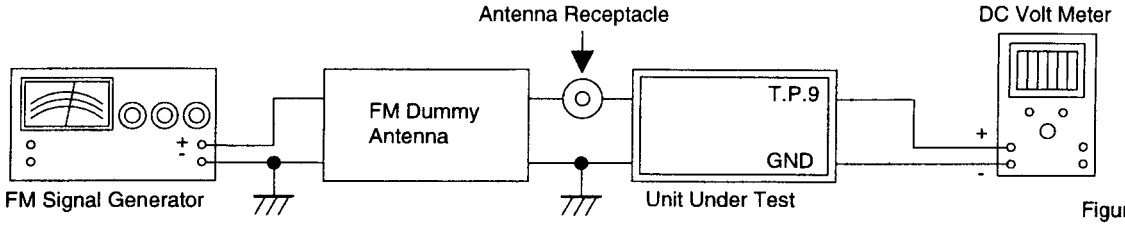


Figure 5

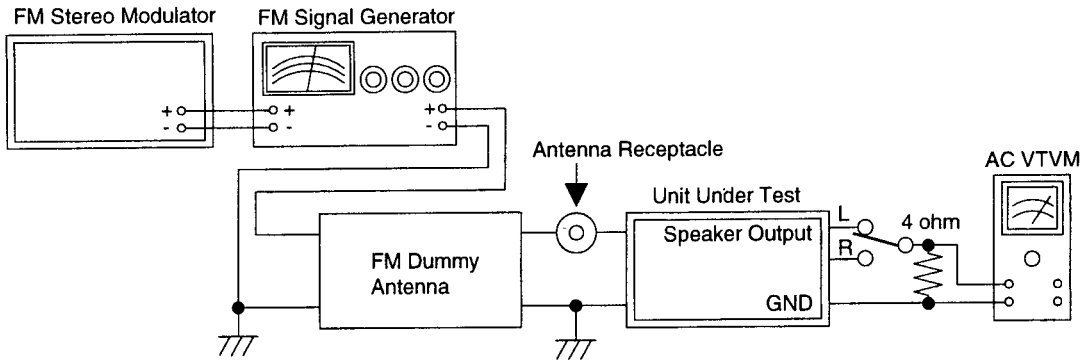


Figure 6

(3) Control Settings

Power Switch ..... ON
Fader Control ..... Center Position
Balance Control ..... Center Position
Treble/Bass Control..... Center Position
Band Switch ..... FM
Others ..... OFF

(4) Adjustment Procedures

Step	Description	Connection	Signal Generator	Dial Control	Test Point/ P.W.Board Coordinates	Adjustment
1	VT Adjustment	Figure 2	—	Max.	T.P.3 (3-B)	Adjust L2006 for 7.5V.
2	IF Adjustment	Figure 3	98.1MHz, 60dB μ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	T.P.7 (4-B) T.P.8 (4-B)	Adjust L2101 for 0±20mV.
3	Ant. Coil Adjustment	Figure 4	90.1MHz, 20dB μ (Mod. 400Hz, Dev. 40kHz)	90.1MHz	Speaker Output	Adjust L2002 for max. output.
4	RF Coil Adjustment	Figure 4	90.1MHz, 20dB μ (Mod. 400Hz, Dev. 40kHz)	90.1MHz	Speaker Output	Adjust L2005 for max. output.
5	IFT Coil Adjustment	Figure 4	98.1MHz, 20dB μ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	Speaker Output	Adjust T2001 for max. output.
6	Signal Meter Adjustment	Figure 5	98.1MHz, 34dB μ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	T.P.9 (4-B)	Adjust VR2101 to 3.5V.
7	Stereo Blend Adjustment (Lch)	Figure 6	98.1MHz, 34dB μ (Mod. 1kHz, Dev. 36kHz, Stereo, Lch Only)	98.1MHz	Speaker Output	Adjust VR2102 for Lch and Rch output level difference to be 8dB.
8	Stereo Blend Adjustment (Rch)	Figure 6	98.1MHz, 34dB μ (Mod. 1kHz, Dev. 36kHz, Stereo, Rch Only)	98.1MHz	Speaker Output	Proceed same adjustment under step 7.

2. MW/LW SECTION

(1) Dummy Antenna Circuit

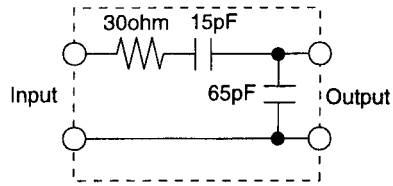


Figure 7

(2) Connections

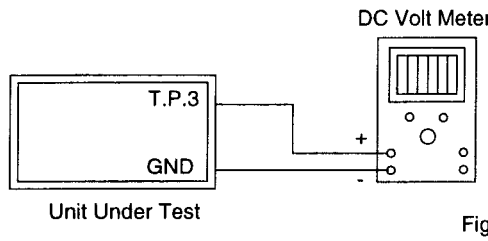


Figure 8

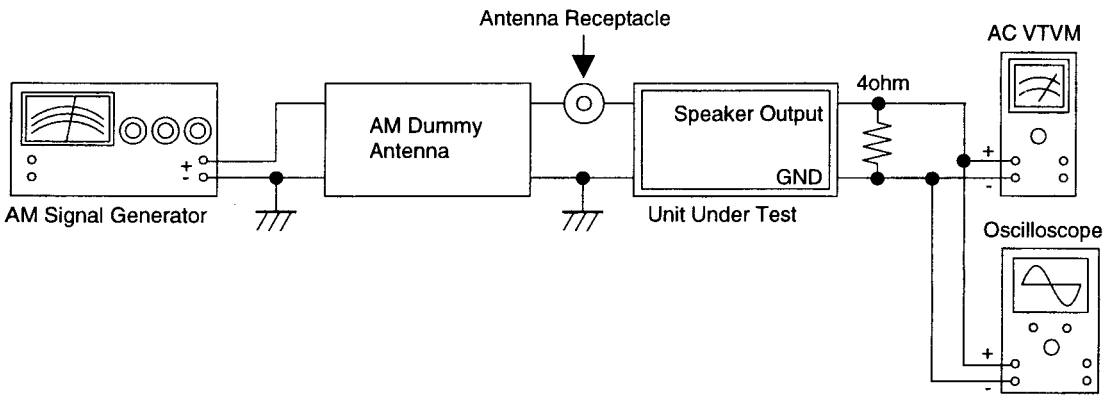


Figure 9

(3) Control Settings

Power Switch	ON	Treble/Bass Control	Center Position
Fader Control	Center Position	Band Switch	LW/MW
Balance Control	Center Position	Others	OFF

(4) Adjustment Procedures

Step	Description	Connection	Signal Generator	Dial Control	Test Point/ P.W.Board Coordinates	Adjustment
1	VT Adjustment	Figure 8	—	LW f. Max.	T.P.3 (3-B)	Adjust L2204 for 7.5V.
2	LW RF Coil Adjustment	Figure 9	162kHz, 30dB μ (Mod. 400Hz, 30%)	162kHz	Speaker Output	Adjust L2202 for max. output.
3	MW RF Coil Adjustment	Figure 9	603kHz, 30dB μ (Mod. 400Hz, 30%)	603kHz	Speaker Output	Adjust L2203 for max. output.
4	MW IFT Coil Adjustment	Figure 8	999kHz, 40dB μ (Mod. 400Hz, 30%)	999kHz	Speaker Output	Adjust T2201, 2202 for max. output.

3. TAPE PLAYER SECTION

(1) Connection

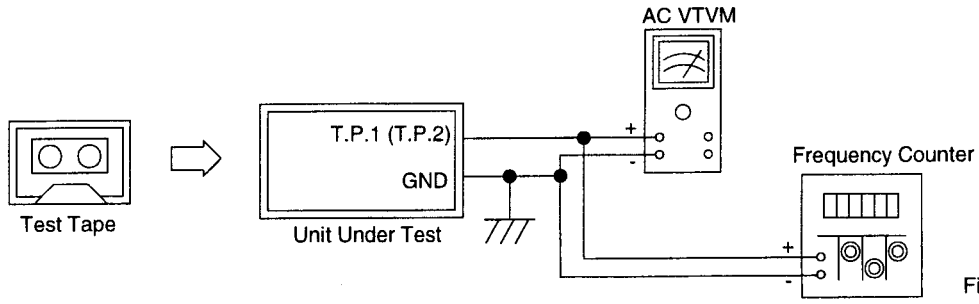


Figure 10

(2) Control Settings

Power Switch ..... ON

Fader Control ..... Center Position

Balance Control ..... Center Position

Treble/Bass Control ..... Center Position

Others ..... OFF

(3) The necessaries for adjustment

GR-S Extension Cord

Assy., EX Cord Kit for GR-S Mechanism

Part No. 01E23255S01

See Adjustment Locations (Figure 13).

(4) Adjustment Procedures

Step	Description	Test Tape	Connection	Test Point/ P.W.Board Coordinates	Adjustment Point	Adjustment
1	Head Azimuth Adjustment	MTT-114NB (14kHz)	Figure 10	T.P.1 (Lch) (2-C) T.P.2 (Rch) (2-C)	Head Azimuth Adjustment screws (Figure 11)	Adjust for Max. and same level output at Forward and Reverse positions.
2 (○)	Dolby Level Adjustment	MTT-150 (400Hz)	Figure 10	T.P.1 (Lch) (2-C) T.P.2 (Rch) (2-C)	VR2101 (Lch) VR2102 (Rch)	Adjust for 388mV at T.P.1 (Lch) and T.P.2 (Rch).
3	Tape Speed Adjustment	MTT-111N (3kHz)	Figure 10	T.P.1 (Lch) (2-C) or T.P.2 (Rch) (2-C)	Tape Speed Adjustment (Figure 12)	Adjust for 2,970 to 3,090Hz at T.P.1 (T.P.2).

NOTE: ○ : For TDM-7545R Model Only, Others : Common

Adjustment Locations

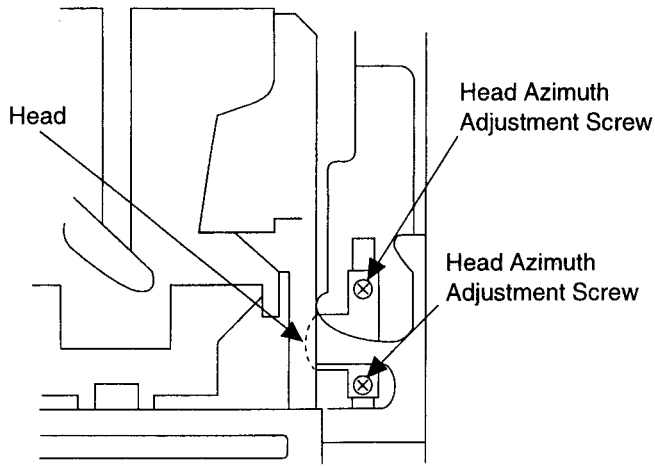


Figure 11

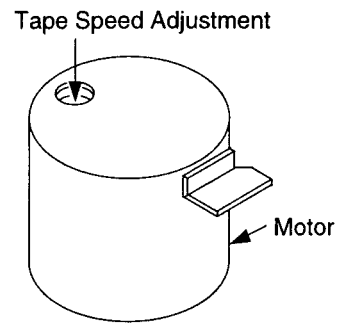


Figure 12

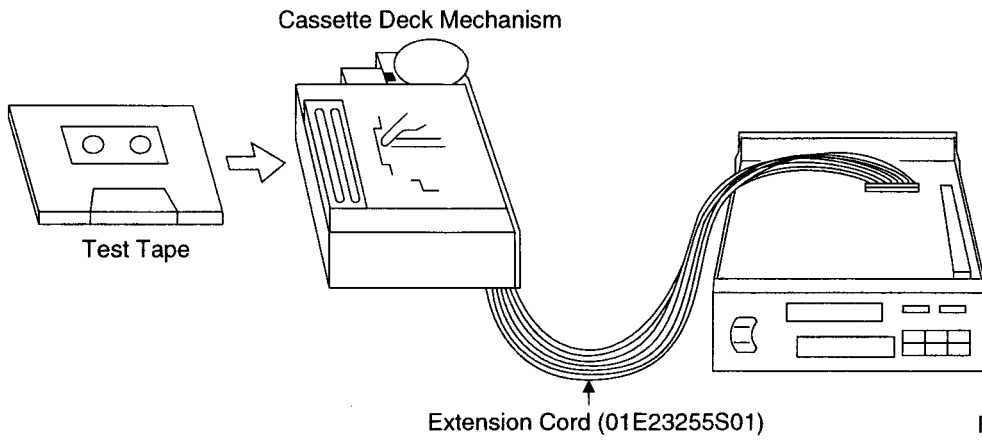
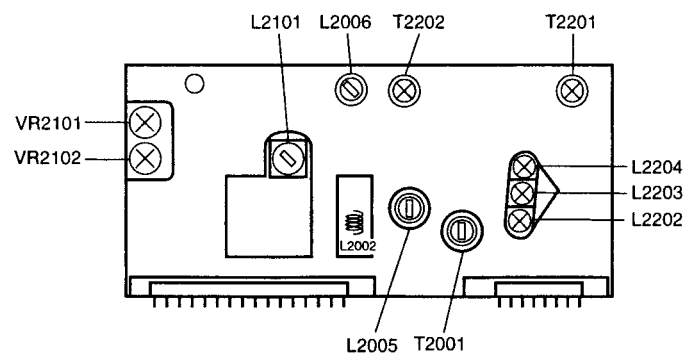


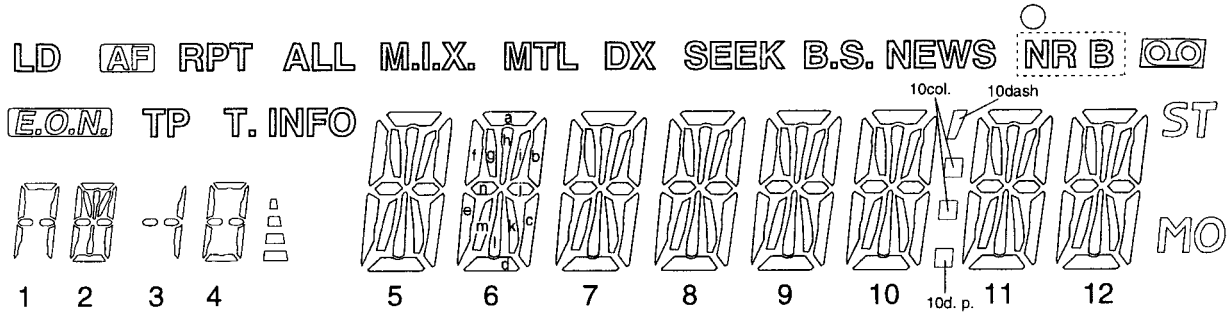
Figure 13



FM/MW/LW Tuner Unit (FE001)

NOTE : For the Test Points, refer to the Parts Layout on P.W. Boards and Wiring Diagram.

LCD Display



PAD No.	1	2	3	4	5	6	7	8	9	10
COM.1	1b, c		2e	2d		4d	4c			
COM.2	E.O.N.	2a	2f, g		2i	4f	4a			
COM.3	1a, e, f, j, n	2h	2n	2l	2j	4n, j	4b			

11	12	13	14	15	16	17	18	19	20
5m	5d	5k	5c	6m	6k	7m	7d	7k	8m
5n	5h, l	5j	6e	6n	6j	7n	7h, l	7j	8n
5g	5i	5b	6f	6g	6i	7g	7a	7i	8g

21	22	23	24	25	26	27	28	29	30
8d	8k	8c	9m	9d	9k	10m	10d	10k	10d. p.
8h, l	8j	9e	9n	9h, l	9j	10n	10h, l	10j	10col
8i	8b	9f	9g	9a	9i	10g	10a	10i	10dash

31	32	33	34	35	36	37	38	39	40
11m	11k	12e	12m	12d	12k	12c	MO	COM. 1	
11n	11j	11c	12n	12h, l	12j	12b	ST		COM. 2
11g	11i	11b	12f	12g	12i	12a			

41	42	43	44	45	46	47	48	49	50
	11d	11e	10c	10e	9c	8e	7c	7e	6c
	11h, l	11f	10b	10f	9b	8f	7b	7f	6b
COM. 3	11a	○ NR B / △ —	NEWS	B. S.	SEEK	8a	DX	MTL	MI. X.

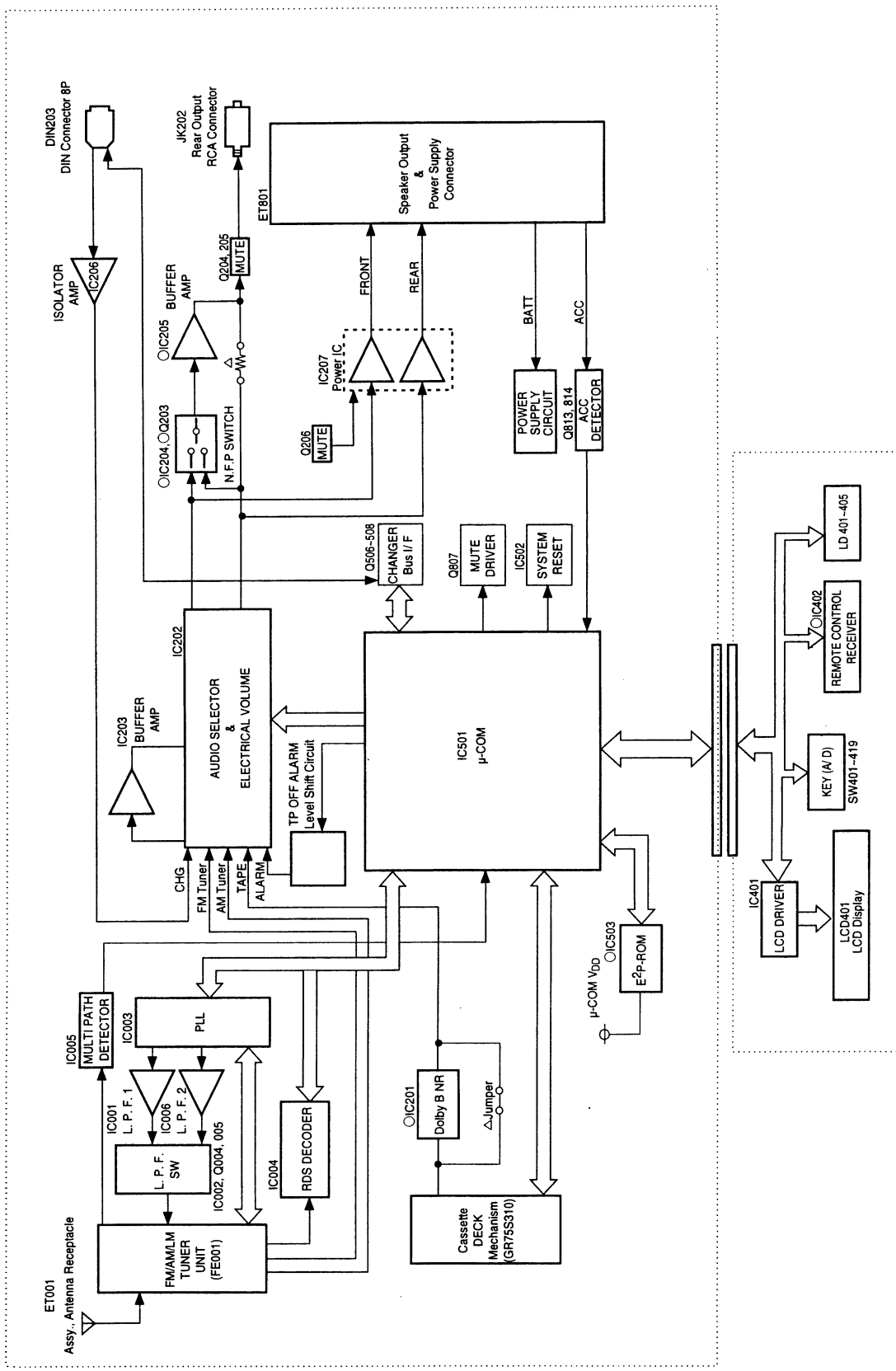
PAD No.	51	52	53	54	55	56	57	58	59	60
COM.1										
COM.2										
COM.3										

61	62	63	64	65	66	67	68	69	70

71	72	73	74	75	76
6d	5e		T. INFO	4e	2c
6h, I	5f	ALL	TP	3b, c	LD
6a	5a	RPT	AF	3n, j	2b

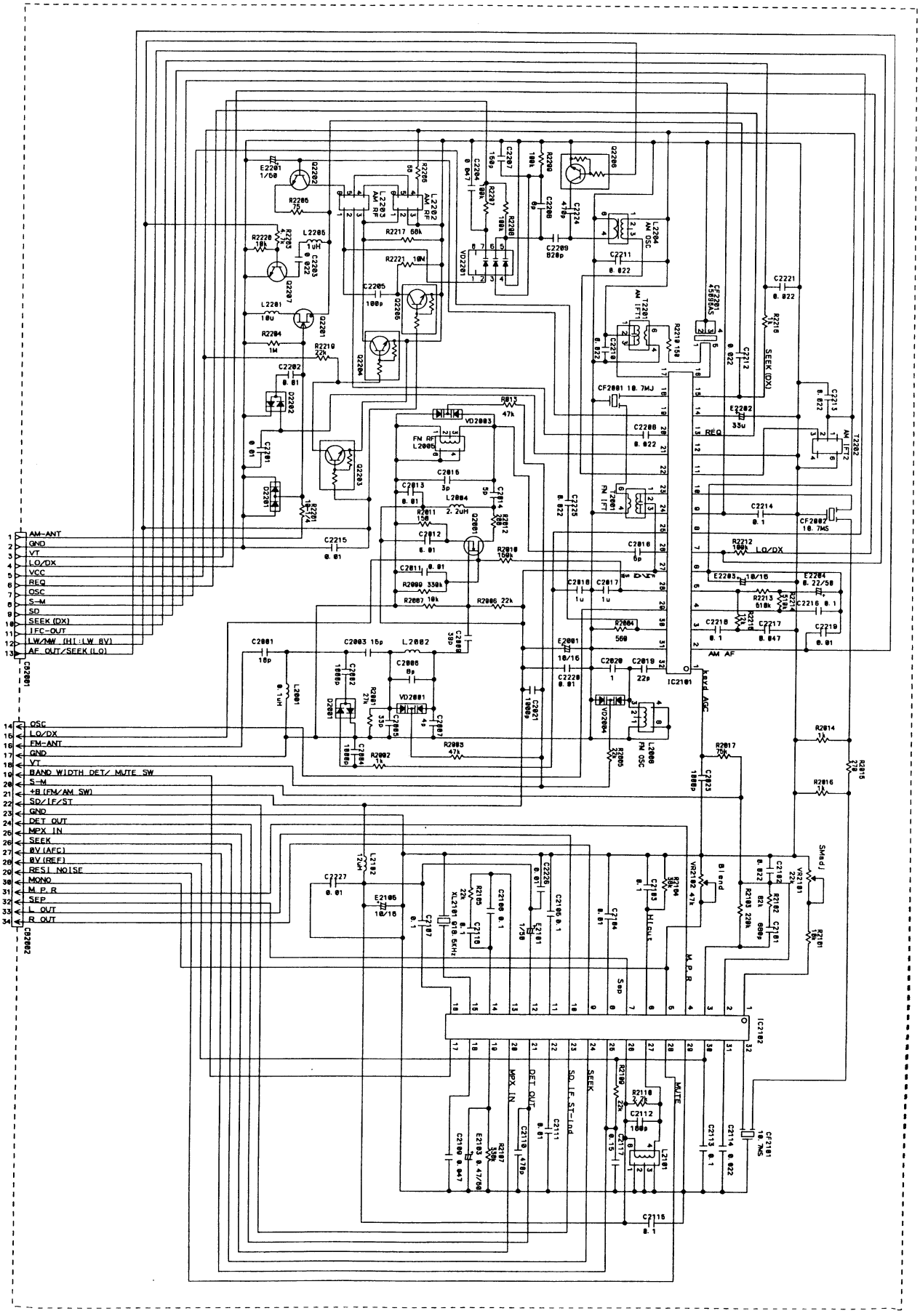
NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others :Common.

Block Diagram



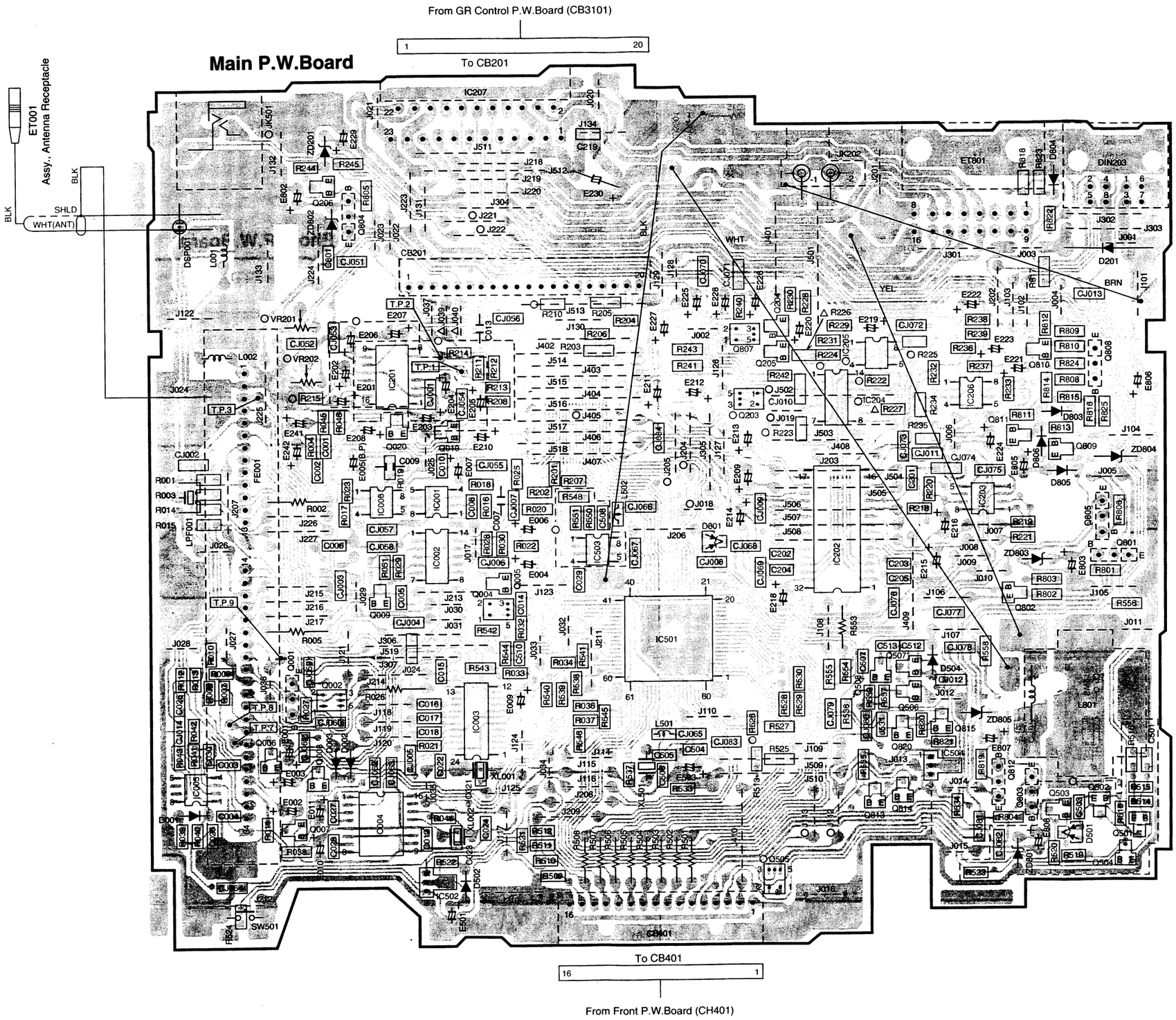
NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others :Common.

Tuner Schematic Diagram



Parts Layout on P.W. Boards and Wiring Diagram (1/2)

All P.W. Boards viewed from soldered side.



NOTE : ○ : For TDM-7545R Model Only,
△ : For TDM-7544R Model Only,
Others : Common

Blue Color Pattern : Foil Side Pattern

Parts Layout on P.W. Boards and Wiring Diagram (2/2)

All P.W. Boards viewed from soldered side.

GR Control P.W.Board

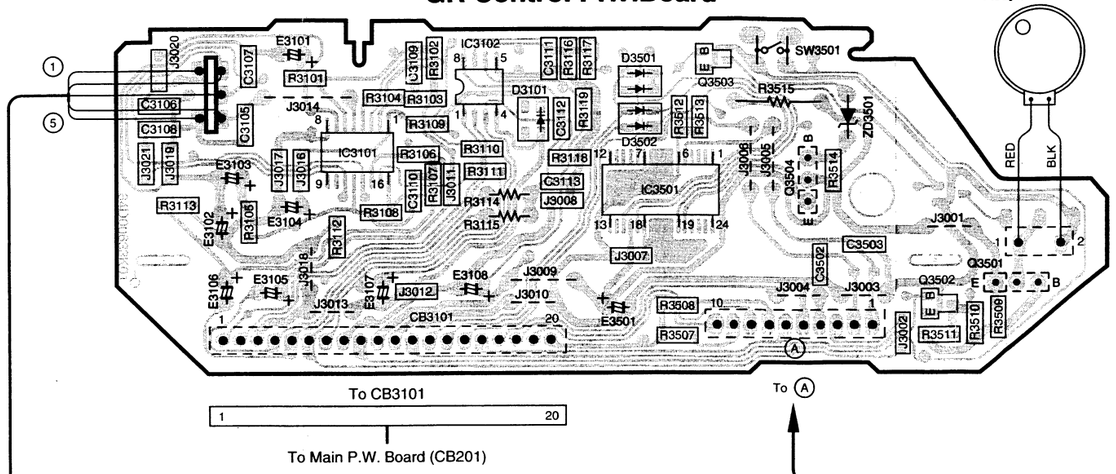
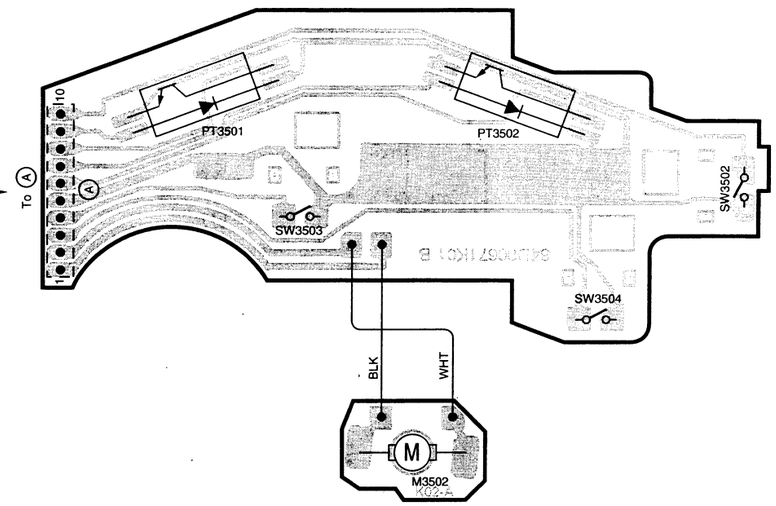
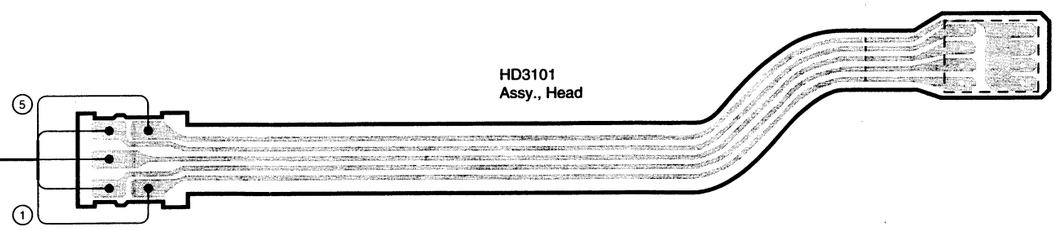


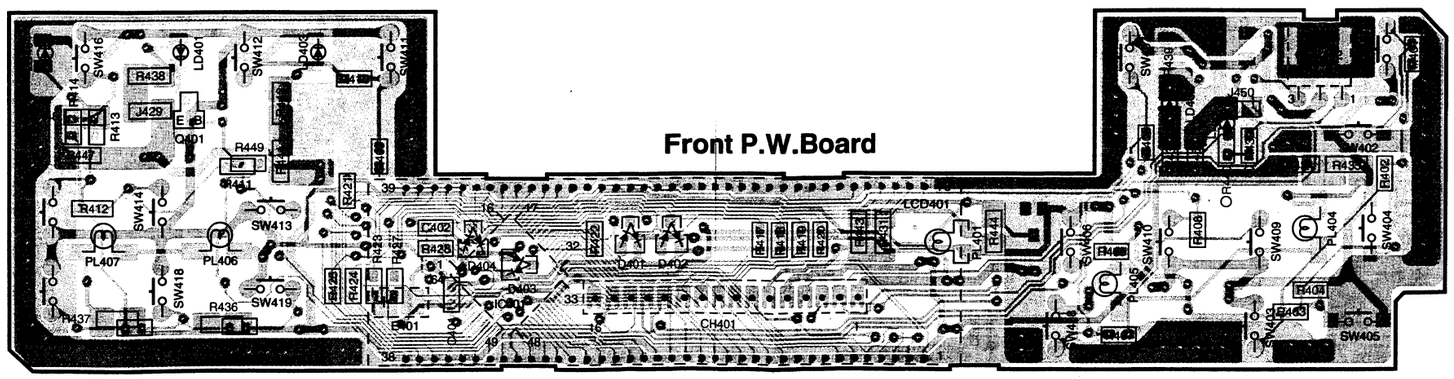
Photo P.W.Board



HD3101
Assy., Head



Front P.W.Board



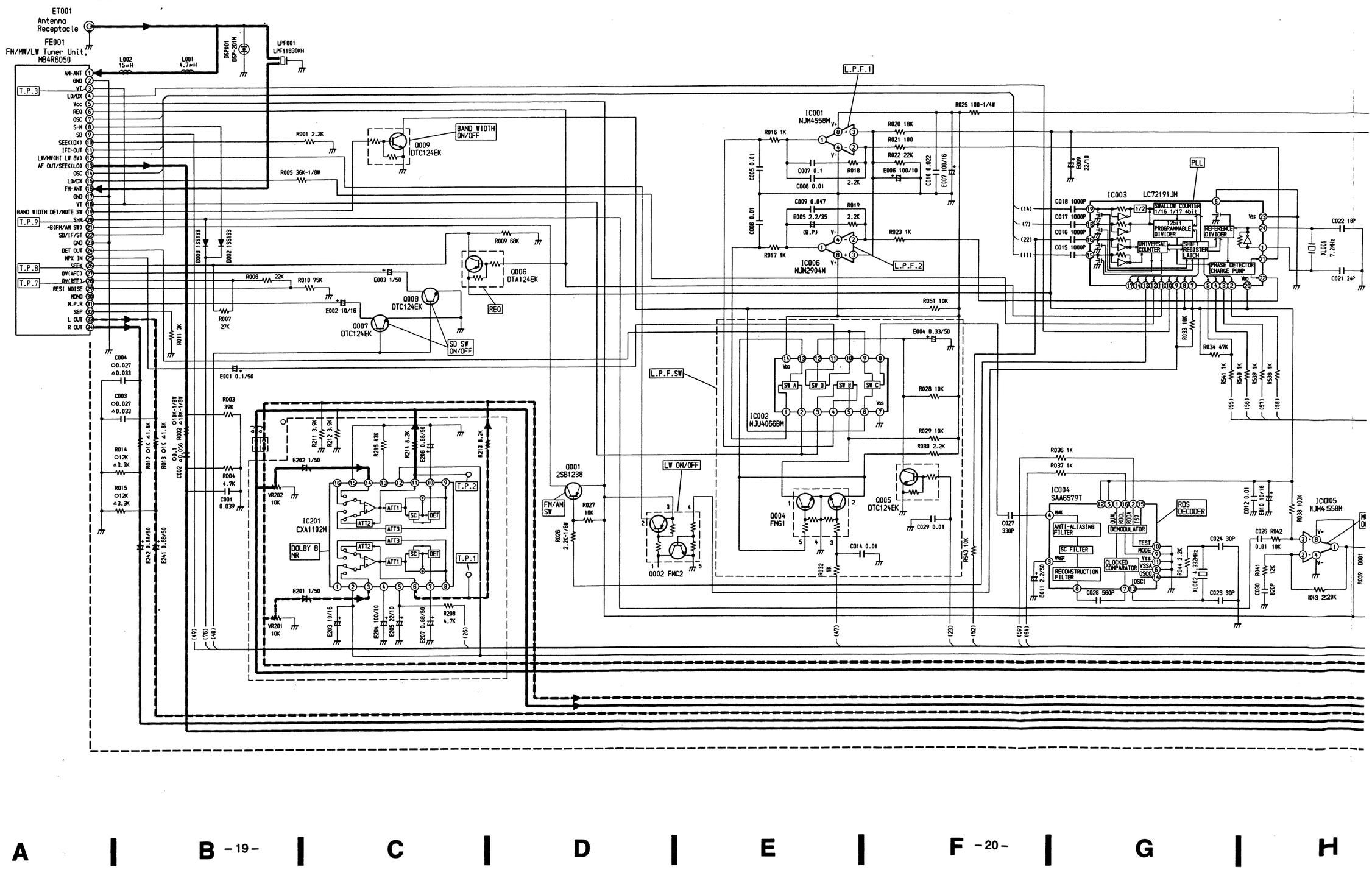
NOTE : ○ : For TDM-7545R Model Only
Others : Common

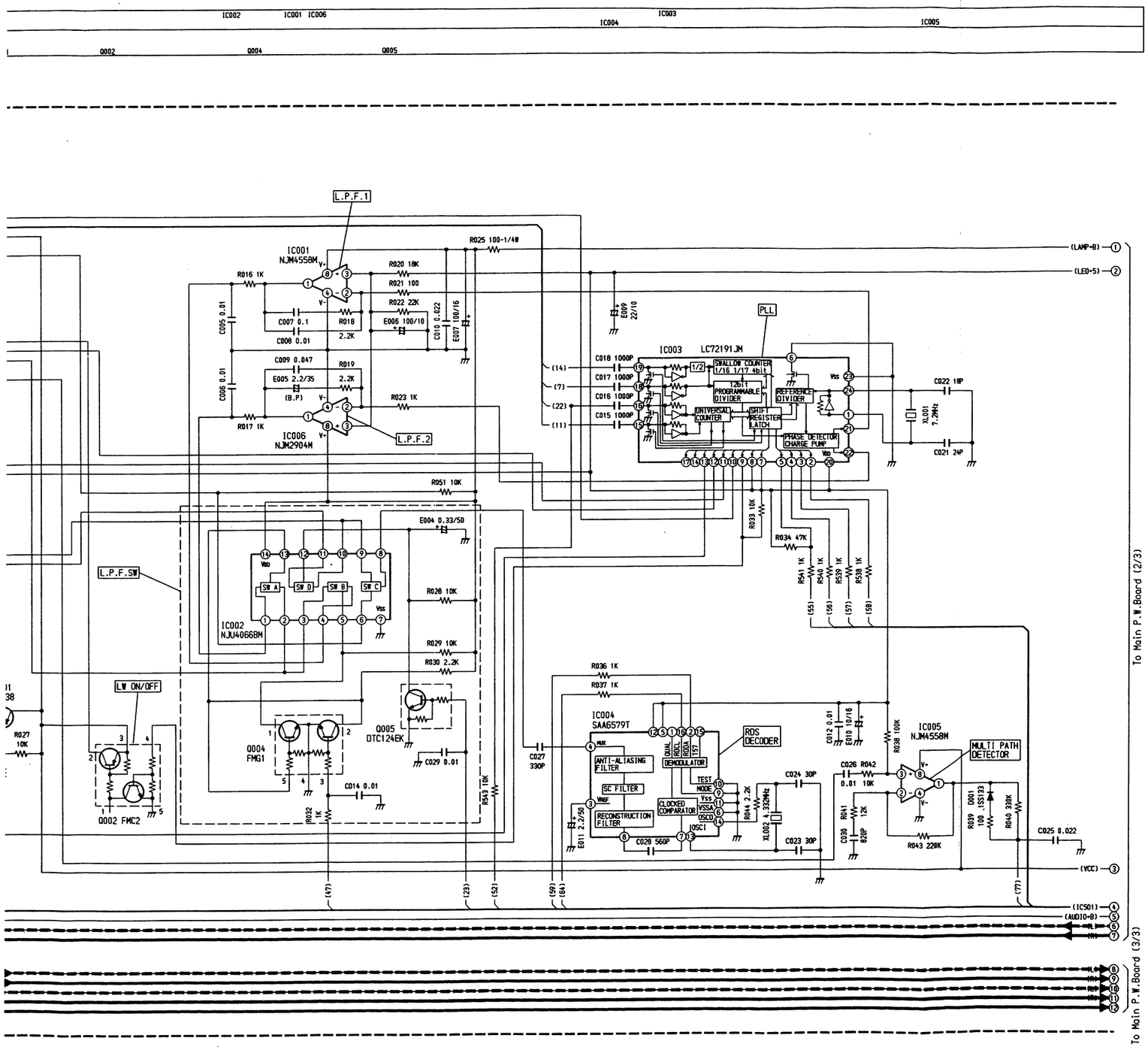
Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

Schematic Diagram (1/4)

IC	IC201						IC002	IC001 IC006		IC004	IC003	IC005
Transistor (Q)		Q007	Q008 Q009	Q006	Q001	Q002	Q004		Q005			

Main P.W.Board (1/3)





IC001, 006

1	3.4V
2–4	0V
5–7	NC
8	13V

IC002

1	13V
2–4	0V
5, 6	13V
7	0V
8–11	3.4V
12	13V
13	0V
14	13V

IC003

1	2.4V	14	NC
2–4	0V	15, 16	0V
5	5V	17	NC
6	0V	18	0V
7, 8	5V	19	2.5V
9–11	0V	20	5V
12	4.6V	21–23	0V
13	0V	24	2.6V

IC004

1	NC	8–11	0V
2	2.6V	12	5V
3	2.5V	13	2.4V
4	0V	14	2.5V
5	5V	15	NC
6	0V	16	2.5V
7	2.5V		

IC005

1, 2	5V
3	4.9V
4	0V
5–7	NC
8	8.8V

○ IC201

1	NC
2	8.8V
3–7	0V
8, 9	NC
10–15	0V
16	NC

	E	C	B	MODE
Q001	9V / 9V	0V / 9V	8V / 8V	AM / FM
Q005	0V / 0V	0V / 14V	5V / 0V	MUTE ON / OFF
Q006	5V	5V	0V	REQ
Q007	0V / 0V	0V / 0V	0V / 5V	SD SW ON / OFF
Q008	0V / 0V	0V / 0V	0V / 5V	SD SW ON / OFF
Q009	0V / 0V	0V / 13V	8V / 0V	BAND WIDTH ON / OFF

	1	2	3	4	5	MODE
Q002	NC	8V / 0V	8V / 8V	5V / 0V	0V / 0V	LW ON / OFF
Q004	13V / 0V	0V / 13V	5V / 0V	0V / 0V	0V / 13V	AF ON / OFF

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input
  - FM 98.1MHz
  - MW 999kHz
  - LW 216kHz
  - Tape ..... Blank

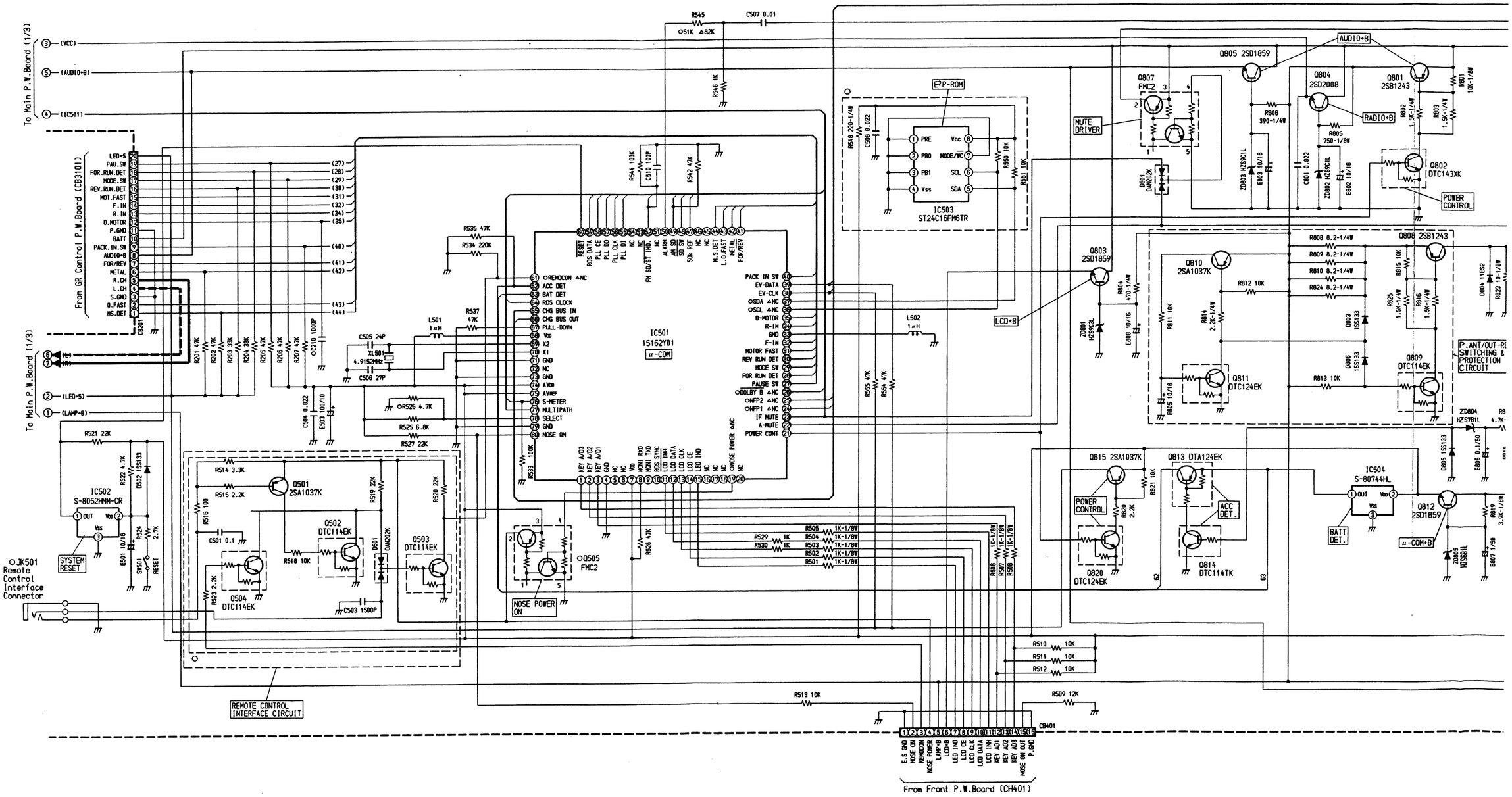
NOTE : ○ : For TDM-7545R Model Only,
● : For TDM-7544R Model Only,
Others : Common.

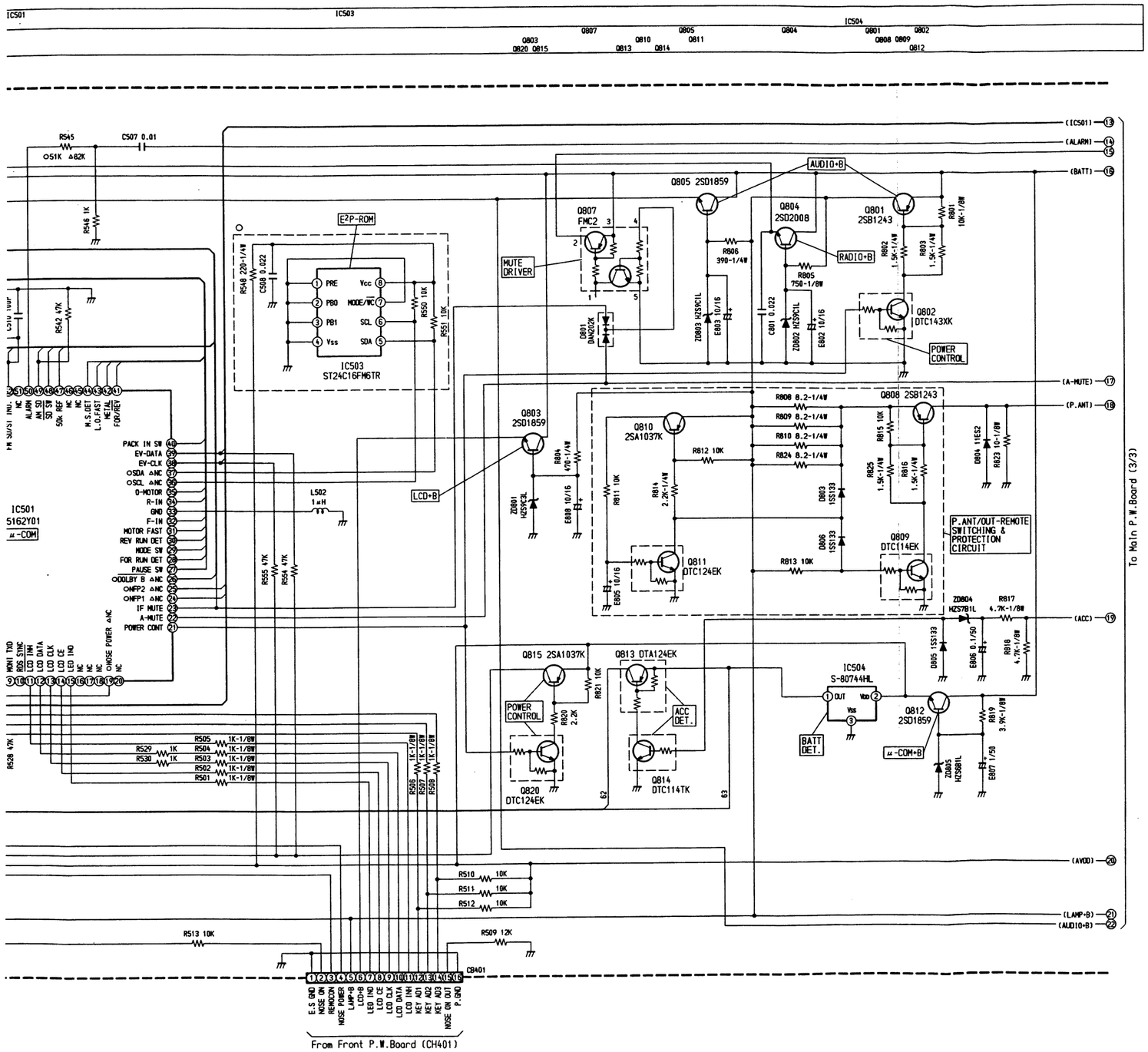
NOTE:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1{,}000{,}000}$

Schematic Diagram (2/4)

IC	IC502	IC501	IC503	IC504
Transistor (Q)	Q504	Q501 Q502 Q503 Q505	Q803 Q820 Q815 Q807 Q810 Q813 Q805 Q811 Q814	Q804 Q801 Q808 Q809 Q802 Q812

Main P.W.Board (2/3)





IC501

1-3	5.1V	29	5.1V	64	2.5V
4	0V	30-35	0V	65	5.1V
5, 6	NC	36, 37	○ 0V	66, 67	0V
7-9	5.1V		△ NC	68	5.1V
10	0V	38-43	0V	69	3.1V
11	5.1V	44	5.1V	70	2.7V
12, 13	0V	45, 46	NC	71	0V
14	3.5V	47, 48	5.1V	72	NC
15	5.1V	49, 50	0V	73	0V
16-18	NC	51	NC	74, 75	5.1V
19	○ 5.1V	52	4.3V	76, 77	0V
	△ NC	53, 54	NC	78	2.1V
20	NC	55-58	0V	79	0V
21	5.1V	59	2.5V	80	2.5V
22, 23	0V	60	5.1V		
24-26	○ 5.1V	61	○ 3.5V		
	△ NC		△ NC		
27, 28	0V	62, 63	4.9V		

IC502

1, 2	5.2V
3	0V

○ IC503

1-7	0V
8	5V

IC504

1	4.9V
2	5.2V
3	0V

	E	C	B	MODE
○ Q501	5V / 5V	5V / 0V	5V / 5V	REAR REMOTE CONTROL ON / OFF
○ Q502	0V / 0V	0V / 0V	4V / 0V	REAR REMOTE CONTROL ON / OFF
○ Q503	0V / 0V	3V / 3V	0V / 0V	REAR REMOTE CONTROL ON / OFF
○ Q504	0V / 0V	0V / 0V	0V / 0V	REAR REMOTE CONTROL ON / OFF
Q801	14V / 14V	14V / 0V	13V / 13V	POWER ON / OFF
Q802	0V / 0V	0V / 14V	5V / 0V	POWER ON / OFF
Q803	9V / 0V	14V / 14V	9V / 0V	POWER ON / OFF
Q804	9V / 0V	14V / 14V	9V / 0V	POWER ON / OFF
Q805	9V / 0V	14V / 14V	9V / 0V	POWER ON / OFF
Q808	14V / 0V	14V / 0V	13V / 13V	POWER ON / OFF
Q809	0V / 0V	0V / 13V	13V / 0V	POWER ON / OFF
Q810	13V / 13V	13V / 0V	13V / 13V	PROTECT ON / OFF
Q811	0V / 0V	13V / 0V	10V / 0V	PROTECT ON / OFF
Q812	5.2V	14V	5.8V	
Q813	5V / 5V	5V / 0V	0V / 5V	ACC ON / OFF
Q814	0V / 0V	0V / 5V	7V / 0V	ACC ON / OFF
Q815	5V / 5V	5V / 0V	5V / 5V	POWER ON / OFF
Q820	0V / 0V	0V / 5V	5V / 0V	POWER ON / OFF

	1	2	3	4	5	MODE
○ Q505	NC	5V	5V	5V	0V	
Q807	NC	14V / 0V	14V / 14V	5V / 0V	0V / 0V	MUTE ON / OFF

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input
  - FM 98.1MHz
  - MW 999kHz
  - LW 216kHz
  - Tape ..... Blank

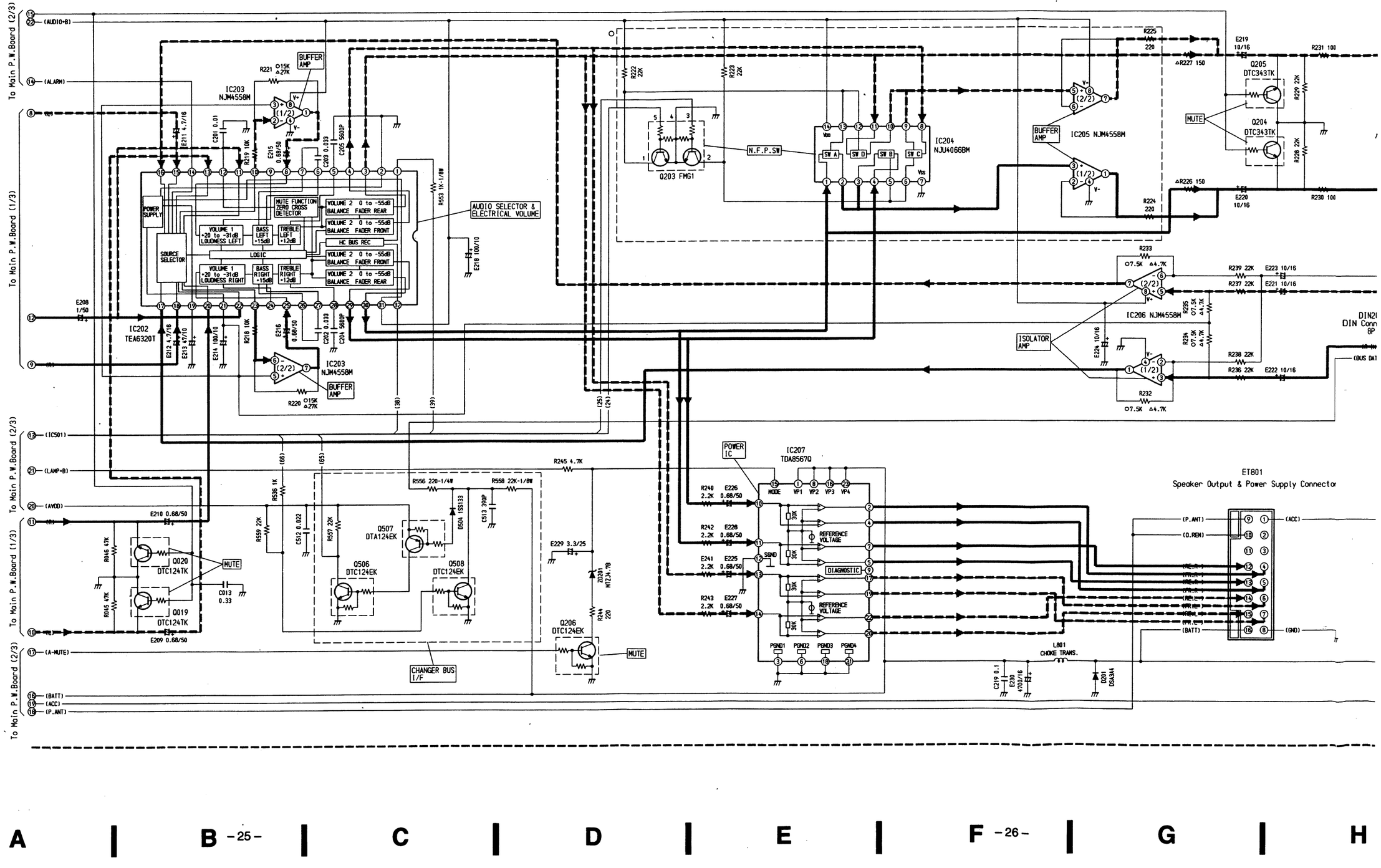
NOTE : ○ : For TDM-7545R Model Only,
● : For TDM-7544R Model Only,
Others : Common.

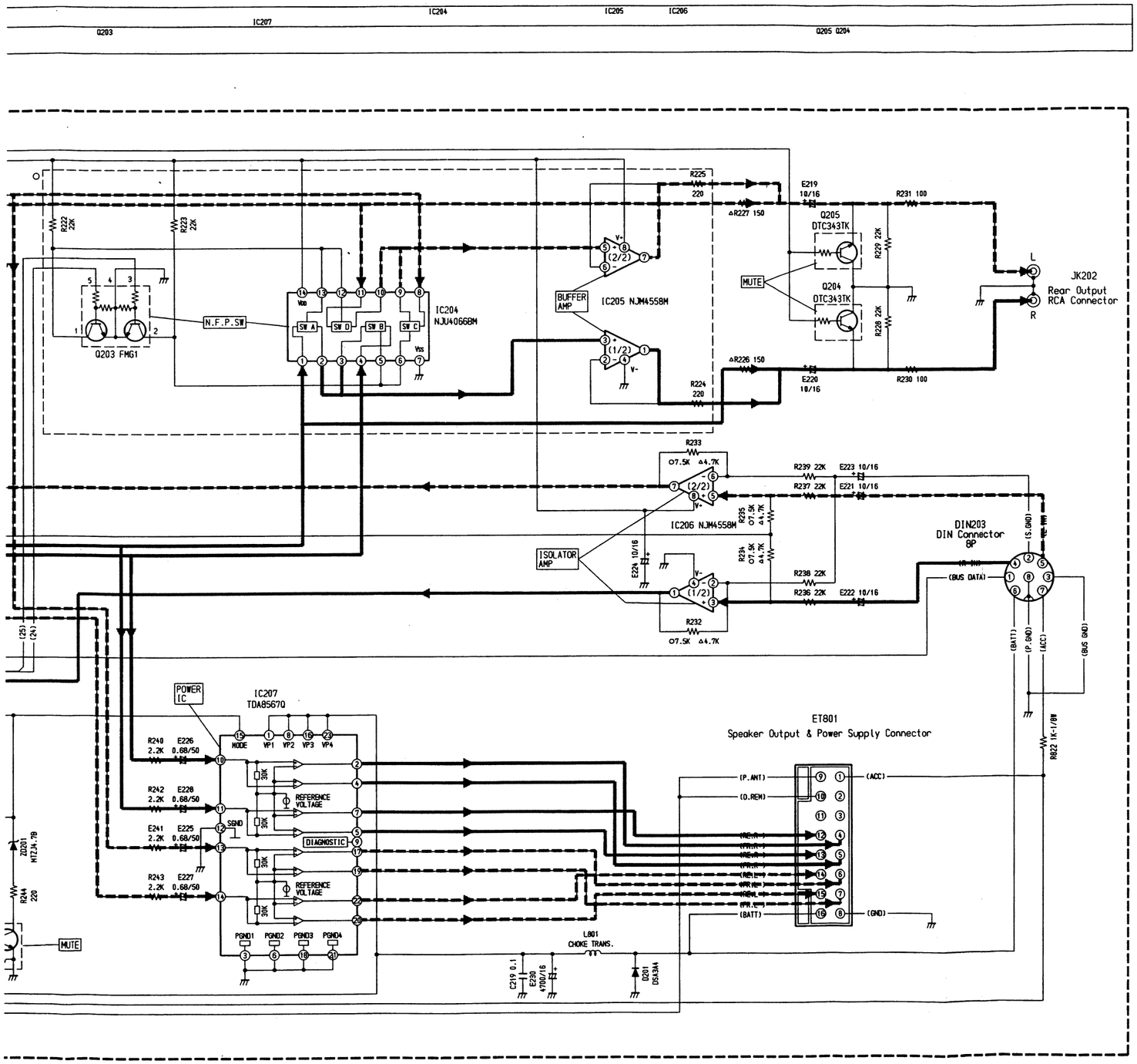
NOTE:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

Schematic Diagram (3/4)

IC	IC202	IC203	IC204	IC205	IC206
Transistor (Q)	Q020 Q019	Q506 Q507 Q508 Q206	Q203 IC207	Q205 Q204	

Main P.W.Board (3/3)





IC202

1	5.2V	13–18	4.5V
2	0V	19	8.9V
3–7	4.5V	20–23	4.5V
8	0V	24	NC
9	NC	25	0V
10	4.5V	26–30	4.5V
11	—	31	9V
12	8.9V	32	4.5V

IC203, 206

1–3	4.4V
4	0V
5–7	4.4V
8	8.8V

○ IC204

1–4	4.4V
5–7	0V
8–11	4.4V
12–14	8.8V

○ IC205

1–3	4.4V
4	0V
5–7	4.4V
8	8.8V

IC207

1	14V	13, 14	2V
2	7.1V	15	5.6V
3	0V	16	14V
4, 5	7.1V	17	7.1V
6	0V	18	0V
7	7.1V	19, 20	7.1V
8	4.5V	21	0V
9	NC	22	7.1V
10, 11	2V	23	14V
12	0V		

	E	C	B	MODE
Q019	0V / 0V	0V / 0V	14V / 0V	MUTE ON / OFF
Q020	0V / 0V	0V / 0V	14V / 0V	MUTE ON / OFF
Q204	0V / 0V	0V / 0V	14V / 0V	MUTE ON / OFF
Q205	0V / 0V	0V / 0V	14V / 0V	MUTE ON / OFF
Q206	0V / 9V	0V / 0V	5V / 0V	MUTE ON / OFF
Q506	0V	5V	0V	
Q507	5V	0V	5V	
Q508	0V	14V	0V	

	1	2	3	4	5	MODE
○ Q203	9V / 0V	0V / 9V	5V / 0V	0V / 0V	0V / 5V	NFP ON / OFF

[Measuring Conditions]

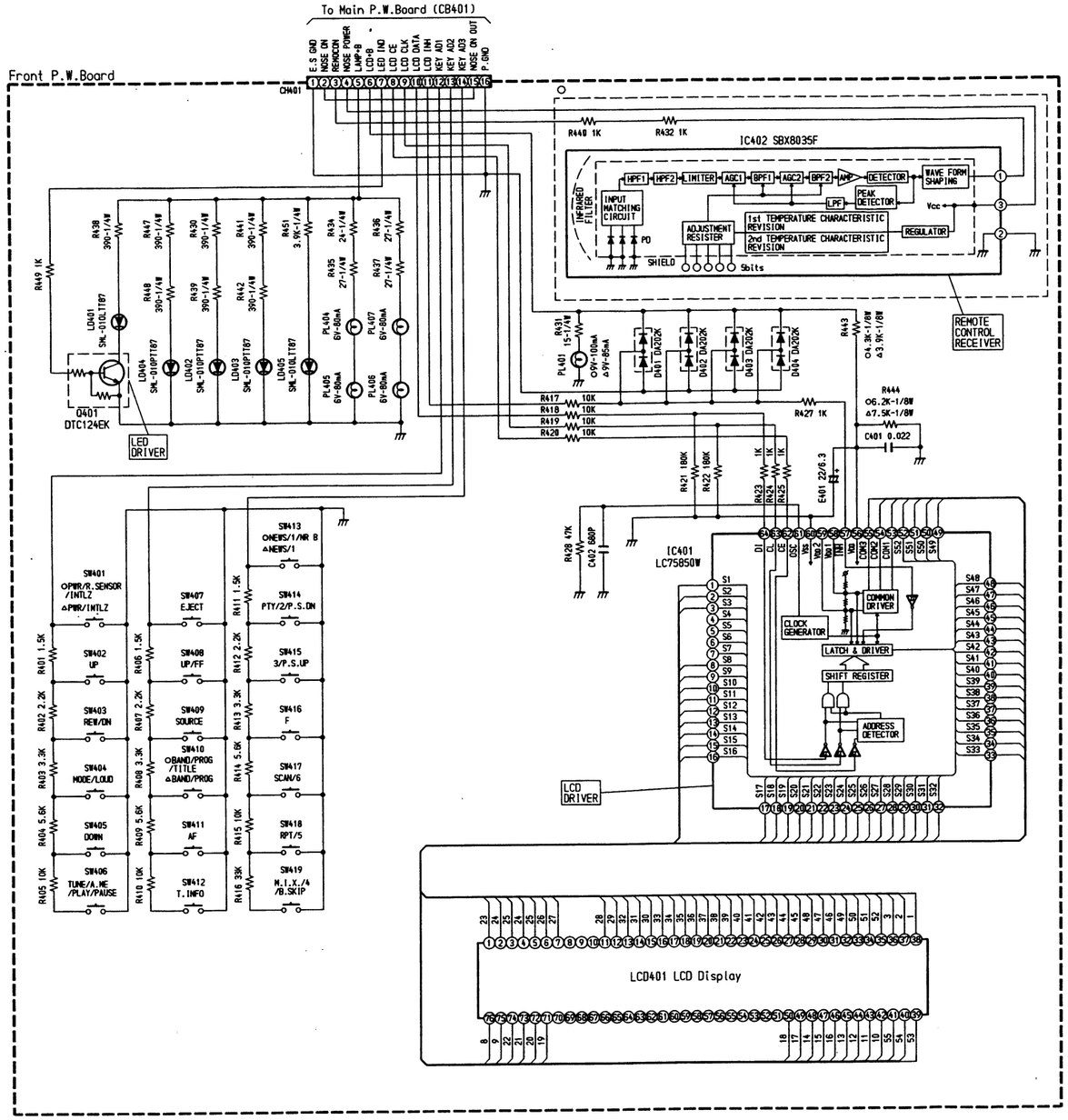
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input
  - FM 98.1MHz
  - MW 999kHz
  - LW 216kHz
  - Tape ..... Blank

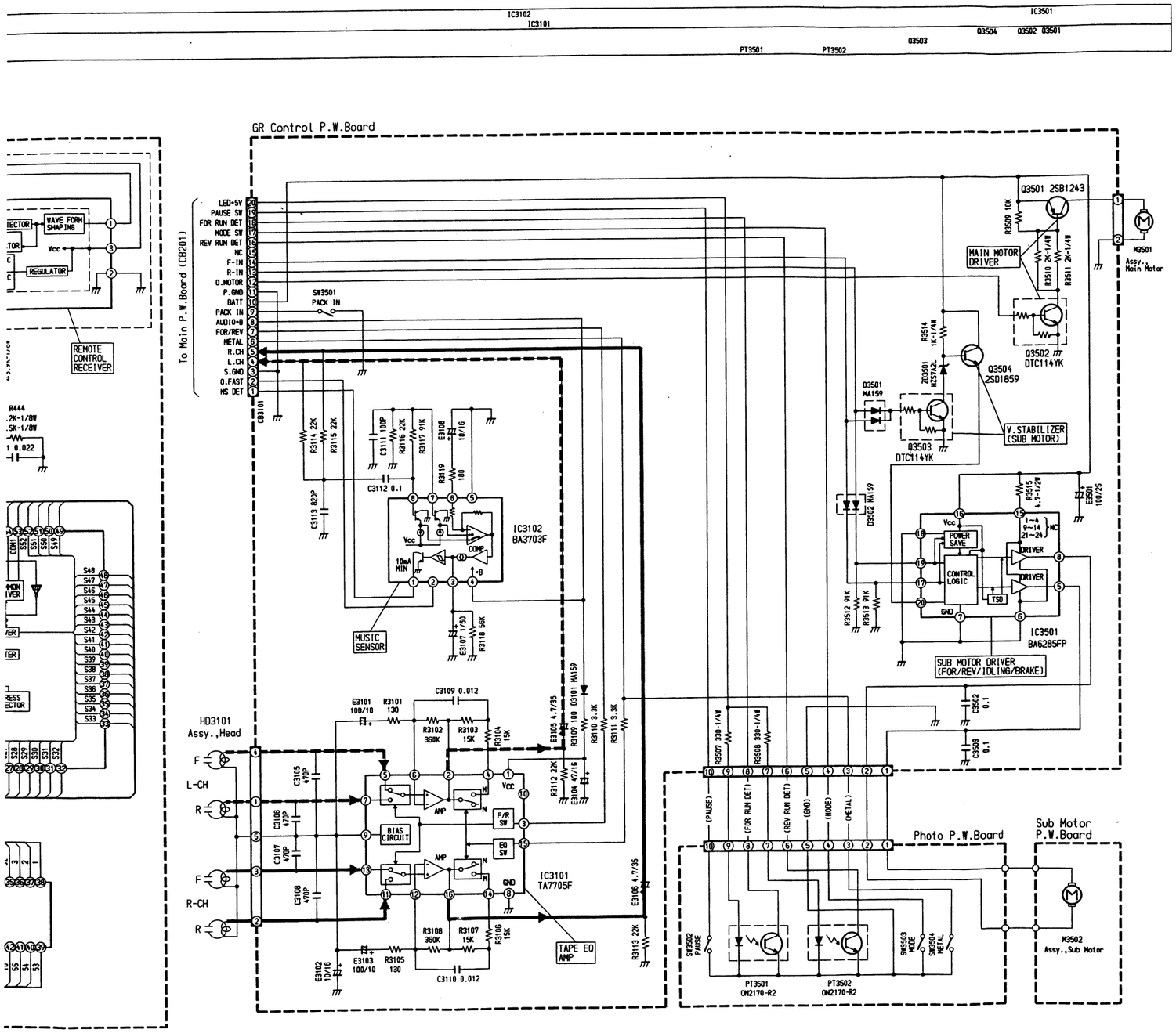
NOTE : ○ : For TDM-7545R Model Only,
● : For TDM-7544R Model Only,
Others : Common.

NOTE:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Schematic Diagram (4/4)

IC	IC401	IC402	IC3101	IC3102
Transistor (Q,PT)	Q401	PT3501	PT3502	Q3503	Q3504





IC401

1-3	2.6V	60	0V
4-7	NC	61	3.9V
8-55	2.6V	62	3.5V
56, 57	5.2V	63	0.4V
58	3.5V	64	0.3V
59	NC		

○ IC402

1	2.3V
2	0V
3	5.1V

	E	C	B	MODE
Q401	0V / 0V	0V / 14V	5V / 0V	LED IND. ON / OFF

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input
  - FM 98.1MHz
  - MW 999kHz
  - LW 216kHz
  - Tape ..... Blank

IC3101

1	10.7V	9	3V
2	3.1V	10	NC
3	5.2V	11-13	3V
4	3.1V	14	3.1V
5-7	3V	15	0V
8	0V	16	3.1V

IC3102

1	5.2V		
2, 3	0V		
4	12V		
5	0V		
6	0.6V		
7, 8	0V		

IC3501

1-4	NC
5-8	0V
9-14	NC
15, 16	12V
17-19	0V
20	12V
21-24	NC

	E	C	B	MODE
Q3501	12V	11.8V	11.3V	
Q3502	0V	0.1V	5V	
Q3503	0V	5.5V	0V	
Q3504	11.6V	12V	12V	

[Measuring Conditions]

- Power Supply Voltage : DC12V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : Tape ..... Blank

NOTE : ○ : For TDM-7545R Model Only,
● : For TDM-7544R Model Only,
Others : Common.

NOTE:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Description of IC Terminal

15162Y01 : IC501

No.	Symbol	I/O	Terminal Description
1	KEY A/D 3	I	Key A/D 3 Input Terminal.
2	KEY A/D 2	I	Key A/D 2 Input Terminal.
3	KEY A/D 1	I	Key A/D 1 Input Terminal.
4	GND	—	GND Connection Terminal.
5 6	NC	—	No Connection Terminal.
7	V_{DD}	—	Power Supply Connection Terminal.
8	MONI RXD	I	RDS Monitor Input Terminal.
9	MONI TXD	O	RDS Monitor Output Terminal.
10	RDS SYNC	O	Sync. Signal Output Terminal.
11	$\overline{\text{LCD INH}}$	O	INH Signal Output Terminal to LCD Driver (LC75850W).
12	LCD DATA	O	Serial Data Output Terminal to LCD Driver (LC75850W).
13	LCD CLK	O	Serial Clock Output Terminal to LCD Driver (LC75850W).
14	LCD CE	O	CE Signal Output Terminal to LCD Driver (LC75850W).
15	LED IND	O	Function Indicator Control Signal Output Terminal.
16 ∫ 18	NC	—	No Connection Terminal.
19	○ NOSE POWER	O	Power Control Signal Output Terminal to Nose.
	△ NC	—	No Connection Terminal.
20	NC	—	No Connection Terminal.
21	POWER CONT	O	Power Supply Control Signal Output Terminal for Audio, Light and Tuner.
22	A-MUTE	O	Audio Mute Signal Output Terminal.
23	IF MUTE	O	IF Mute Output Terminal.
24	○ NFP 1	O	NFP Control Signal Output Terminal.
	△ NC	—	No Connection Terminal.
25	○ NFP 2	O	NFP Control Signal Output Terminal.
	△ NC	—	No Connection Terminal.
26	○ $\overline{\text{DOLB Y B}}$	O	B NR ON/OFF Signal Output Terminal.
	△ NC	—	No Connection Terminal.
27	PAUSE SW	I	Pause Mode Detection Input Terminal.
28	FOR RUN DET	I	For Reel Rotating Detection Input Terminal.
29	MODE SW	I	Mode Detection Input Terminal.
30	REV RUN DET	I	Rev Reel Rotating Detection Input Terminal.
31	MOTOR FAST	O	Main Motor Rotating Control Output Terminal.
32	F-IN	O	Sub Motor Rotating Control Output Terminal.
33	GND	—	GND Connection Terminal.
34	R-IN	O	Sub Motor Rotating Control Output Terminal.
35	O-MOTOR	O	Motor Rotating Control Output Terminal.

No.	Symbol	I/O	Terminal Description
36	○ SCL	O	Clock Output Terminal for E2P-ROM.
	△ NC	—	No Connection Terminal.
37	○ SDA	I/O	Data Terminal for E2P-ROM.
	△ NC	—	No Connection Terminal.
38	EV-CLK	O	Serial Clock Output Terminal to Electrical Volume (TEA6320T).
39	EV-DATA	O	Serial Data Output Terminal to Electrical Volume (TEA6320T).
40	PACK IN SW	I	Pack IN Detection Input Terminal.
41	FOR / $\overline{\text{REV}}$	O	Tape Direction Indicator Output Terminal.
42	METAL	I	Metal Tape Detection Terminal.
43	L.O.FAST	O	Gain Control Signal Output Terminal of MS IC at CUE / REV.
44	M.S.DET	I	Blank Detection Signal Input Terminal.
45	NC	—	No Connection Terminal.
46			
47	50k REF	O	LPF Switching Signal Output Terminal at Active RDS.
48	$\overline{\text{SD SW}}$	O	Time Constant Switching Terminal for High Speed Active PLL.
49	AM SD	I	AM SD Signal Input Terminal.
50	ALARM	O	Alarm Signal Output Terminal.
51	NC	—	No Connection Terminal.
52	FM SD / $\overline{\text{ST IND.}}$	I	ST Signal Input Terminal at Receiving FM. FM SD Signal Input Terminal at Tuning FM.
53	NC	—	No Connection Terminal.
54			
55	PLL DI	I	Data Input Terminal from PLL (LC72191JM).
56	PLL CLK	O	Sync. Signal Output Terminal to PLL (LC72191JM).
57	PLL DO	O	Data Output TErminal to PLL (LC72191JM).
58	PLL CE	O	Communication Control Signal Output Terminal to PLL (LC72191JM).
59	RDS DATA	I	RDS Data Input Terminal from RDS Decoder (SAA6579T).
60	$\overline{\text{RESET}}$	I	System Reset Signal Input Terminal.
61	○ REMOCON	I	Remocon Data Input Terminal.
	△ NC	—	No Connection Terminal.
62	ACC DET	I	ACC (Ignition) Detection Signal Input Terminal.
63	BAT DET	I	Battery Detection Signal Input Terminal. (Manage Compulsion Stand-by.)
64	RDS CLOCK	I	RDS Clock Input Terminal from RDS Decoder (SAA6579T).
65	CHG BUS IN	I	Signal Input Terminal from CD Changer BUS I / F.
66	CHG BUS OUT	O	Signal Output Terminal to CD Changer BUS I / F.
67	PULL-DOWN	—	Pull-Down Connection Terminal.
68	V_{DD}	—	Power Supply Connection Terminal.
69	X2	—	System Clock OSC Circuit Connection Terminal. (4.9152MHz)
70	X1		
71	GND	—	GND Connection Terminal.
72	NC	—	No Connection Terminal.

No.	Symbol	I/O	Terminal Description
73	GND	—	GND Connection Terminal.
74	AV_{DD}	—	Analog Power Supply Terminal for A/D Converter.
75	AV_{REF}	I	Reference Voltage Input Terminal for A/D Converter.
76	S-METER	I	Signal Meter Input Terminal.
77	MULTIPATH	I	Multi Path Rejection Detection Terminal for Receiving Station.
78	SELECT	I	Function Set Up Input Terminal.
79	GND	—	GND Connection Terminal.
80	NOSE ON	I	Front Panel Detection Signal Input Terminal.

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others :Common.

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μ F=microfarads,pF=picofarads

Abbreviations

RES.= Resistor	CAP.= Capacitor
C.F.= Carbon Film	ELY.= Electrolytic
M.F.= Metal Film	CER.= Ceramic
M.O.= Metal Oxide Film	MYL.= Mylar
M.P.= Metal Plate	TAN.= Tantalum
TR. = Transistor	POLY.= Polystyrol
TRANS.= Transformer	PP. = Polypropylene
CP. = Chip	PLT.= Polyethylene
	PF. = Polyester Film

	Symbol No.	Part No.	Description
	Main P.W.Board		
	IC's		
	IC001	51E20551S01	NJM4558M
	IC002	51E23844S01	NJU4066BM
	IC003	51T85265W02	LC72191JM
	IC004	51T55054W02	SAA6579T
	IC005	51E20551S01	NJM4558M
	IC006	51E23842S01	NJM2904M
○	IC201	51T11210W01	CXA1102M
	IC202	51T65131W01	TEA6320T
	IC203	51E20551S01	NJM4558M
○	IC204	51E23844S01	NJU4066BM
○	IC205	51E20551S01	NJM4558M
	IC206	51E20551S01	NJM4558M
	IC207	51T95038W02	TDA8567Q
	IC501	51T15162Y01	15162Y01
	IC502	51T95014F13	S-8052HNM-CR
○	IC503	51T15231Y01	ST24C16FM6TR
	IC504	51T95563W01	S-80744HL
	Transistors		
	Q001	48E23541S01	2SB1238
	Q002	48E11274S01	CP., FMC2
	Q004	48E23846S01	CP., FMG1
	Q005	48E10426S01	CP., DTC124EK
	Q006	48E22092S01	CP., DTA124EK
	Q007	48E10426S01	CP., DTC124EK
	Q008	48E10426S01	CP., DTC124EK
	Q009	48E10426S01	CP., DTC124EK
	Q019	48E27613S01	CP., DTC124TK
	Q020	48E27613S01	CP., DTC124TK
○	Q203	48E23846S01	CP., FMG1
	Q204	48E20986S01	CP., DTC343TK
	Q205	48E20986S01	CP., DTC343TK
	Q206	48E10426S01	CP., DTC124EK
○	Q501	48E22900S01	CP., 2SA1037K
○	Q502	48E22093S01	CP., DTC114EK
○	Q503	48E22093S01	CP., DTC114EK
○	Q504	48E22093S01	CP., DTC114EK
○	Q505	48E11274S01	CP., FMC2
	Q506	48E10426S01	CP., DTC124EK
	Q507	48E22092S01	CP., DTA124EK
	Q508	48E10426S01	CP., DTC124EK
	Q801	48E23853S01	2SB1243
	Q802	48E22095S01	CP., DTC143XK
	Q803	48E23606S01	2SD1859
	Q804	48E23542S01	2SD2008
	Q805	48E23606S01	2SD1859
	Q807	48E11274S01	CP., FMC2
	Q808	48E23853S01	2SB1243
	Q809	48E22093S01	CP., DTC114EK
	Q810	48E22900S01	CP., 2SA1037K
	Q811	48E10426S01	CP., DTC124EK
	Q812	48E23606S01	2SD1859
	Q813	48E22092S01	CP., DTA124EK
	Q814	48E23601S01	CP., DTC114TK
	Q815	48E22900S01	CP., 2SA1037K
	Q820	48E10426S01	CP., DTC124EK
	Diodes / Surge Protector		
	D001	48E22916S01	1SS133
	D002	48E22916S01	1SS133
	D003	48E22916S01	1SS133
	D201	48T68580F03	DSA3A4
○	D501	48E10945S01	CP., DAN202K
	D502	48E22916S01	1SS133
	D504	48E22916S01	1SS133
	D801	48E10945S01	CP., DAN202K
	D803	48E22916S01	1SS133
	D804	48E20758S01	11ES2
	D805	48E22916S01	1SS133
	D806	48E22916S01	1SS133
	ZD201	48E25416S01	Zener, MTZJ4.7B
	ZD801	48T83128F27	Zener, HZS9C3L
	ZD802	48T83128F25	Zener, HZS9C1L
	ZD803	48T83128F25	Zener, HZS9C1L
	ZD804	48T83128F13	Zener, HZS7B1L
	ZD805	48T83128F04	Zener, HZS6B1L
	DSP001	48T81909F01	Surge Protector, DSP-201M

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

Symbol No.	Part No.	Description
	Coils	
	L001	25E23608S01	Inductor, 4.7µH
	L002	24E24202S01	Inductor, 15µH
	L501	24E22096S01	Inductor, CP. 1µH
	L502	24E22096S01	Inductor, CP. 1µH
	L801	24E27607S01	Choke, Trans.
	Crystals	
	XL001	91E24846S01	7.2MHz
	XL002	91E27606S01	4.332MHz
	XL501	91E27605S01	4.9152MHz
	Filter	
	LPF001	91T75257W02	LPF11830KH
	Switch	
	SW501	40E27609S01	Tact, SKHH17920A (RESET)
	Capacitors	
	C001	08E24214S01	CP., 0.039µF
	E001	23E09402S10	ELY., 0.1µF / 50V
○	C002	08E26532S01	CP., 0.1µF
△	C002	08E27735S01	CP., 0.056µF
	E002	23E09402S02	ELY., 10µF / 16V
○	C003	08E08577S04	CP., 0.027µF
△	C003	08E22086S01	CP., 0.033µF
	E003	23E09402S01	ELY., 1µF / 50V
○	C004	08E08577S04	CP., 0.027µF
△	C004	08E22086S01	CP., 0.033µF
	E004	23E09402S16	ELY., 0.33µF / 50V
	C005	08E22083S01	CP., 0.01µF
	E005	23E09403S03	ELY., (B.P) 2.2µF / 35V
	C006	08E22083S01	CP., 0.01µF
	E006	23E09402S09	ELY., 100µF / 10V
	C007	08E22435S01	TF, 0.1µF
	E007	23E27615S01	ELY., 100µF / 16V
	C008	08E22083S01	CP., 0.01µF
	C009	08E22938S01	TF, 0.047µF
	E009	23E09402S07	ELY., 22µF / 10V
	C010	08E22085S01	CP., 0.022µF
	E010	23E09402S02	ELY., 10µF / 16V

Symbol No.	Part No.	Description
	E011	23E09402S13	ELY., 2.2µF / 50V
	C012	08E22083S01	CP., 0.01µF
	C013	08E27616S01	TF, 0.33µF
	C014	08E22083S01	CP., 0.01µF
	C015	08E22081S01	CP., 1000pF
	C016	08E22081S01	CP., 1000pF
	C017	08E22081S01	CP., 1000pF
	C018	08E22081S01	CP., 1000pF
	C021	08E23580S01	CP., 24pF
	C022	08E23579S01	CP., 18pF
	C023	08E08423S05	CP., 30pF
	C024	08E08423S05	CP., 30pF
	C025	08E22085S01	CP., 0.022µF
	C026	08E22083S01	CP., 0.01µF
	C027	08E22079S01	CP., 330pF
	C028	08E27612S01	CP., 560pF
	C029	08E22083S01	CP., 0.01µF
	C030	08E22511S01	CP., 820pF
	C201	08E22083S01	CP., 0.01µF
○	E201	23E09402S01	ELY., 1µF / 50V
	C202	08E22086S01	CP., 0.033µF
○	E202	23E09402S01	ELY., 1µF / 50V
	C203	08E22086S01	CP., 0.033µF
○	E203	23E09402S02	ELY., 10µF / 16V
	C204	08E23599S01	CP., 5600pF
○	E204	23E09402S09	ELY., 100µF / 10V
	C205	08E23599S01	CP., 5600pF
○	E205	23E09402S07	ELY., 22µF / 10V
○	E206	23E09402S03	ELY., 0.68µF / 50V
○	E207	23E09402S03	ELY., 0.68µF / 50V
	E208	23E09402S01	ELY., 1µF / 50V
	E209	23E09402S03	ELY., 0.68µF / 50V
○	C210	08E22081S01	CP., 1000pF
	E210	23E09402S03	ELY., 0.68µF / 50V
	E211	23E27614S01	ELY., 4.7µF / 16V
	E212	23E27614S01	ELY., 4.7µF / 16V
	E213	23E09402S12	ELY., 47µF / 10V
	E214	23E09402S09	ELY., 100µF / 10V
	E215	23E09402S03	ELY., 0.68µF / 50V
	E216	23E09402S03	ELY., 0.68µF / 50V
	E218	23E09402S09	ELY., 100µF / 10V
	C219	08E22088S01	CP., 0.1µF
	E219	23E09402S02	ELY., 10µF / 16V
	E220	23E09402S02	ELY., 10µF / 16V
	E221	23E09402S02	ELY., 10µF / 16V
	E222	23E09402S02	ELY., 10µF / 16V
	E223	23E09402S02	ELY., 10µF / 16V
	E224	23E09402S02	ELY., 10µF / 16V
	E225	23E09402S03	ELY., 0.68µF / 50V

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

	Symbol No.	Part No.	Description
	E226	23E09402S03	ELY., 0.68μF / 50V
	E227	23E09402S03	ELY., 0.68μF / 50V
	E228	23E09402S03	ELY., 0.68μF / 50V
	E229	23E09402S04	ELY., 3.3μF / 25V
	E230	23E27604S01	ELY., 4700μF / 16V
	E241	23E09402S03	ELY., 0.68μF / 50V
	E242	23E09402S03	ELY., 0.68μF / 50V
○	C501	08E22088S01	CP., 0.1μF
	E501	23E09402S02	ELY., 10μF / 16V
○	C503	08E08577S02	CP., 1500pF
	E503	23E09402S09	ELY., 100μF / 10V
	C504	08E22085S01	CP., 0.022μF
	C505	08E23580S01	CP., 24pF
	C506	08E08423S04	CP., 27pF
	C507	08E22083S01	CP., 0.01μF
○	C508	08E22085S01	CP., 0.022μF
	C510	08E22899S01	CP., 100pF
	C512	08E22085S01	CP., 0.022μF
	C513	08E23557S01	CP., 390pF
	C801	08E22085S01	CP., 0.022μF
	E802	23E08383S08	ELY., 10μF / 16V
	E803	23E08383S08	ELY., 10μF / 16V
	E805	23E09402S02	ELY., 10μF / 16V
	E806	23E08383S18	ELY., 0.1μF / 50V
	E807	23E08383S15	ELY., 1μF / 50V
	E808	23E08383S08	ELY., 10μF / 16V

	Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
	R001	06E22051S01	2.2K ohm
	R003	06E20850S01	39K ohm
	R004	06E22055S01	4.7K ohm
	R007	06E20904S01	27K ohm
	R008	06E22060S01	22K ohm
	R009	06E22064S01	68K ohm
	R010	06E27611S01	75K ohm
	R011	06E22951S01	3K ohm
○	R012	06E22048S01	1K ohm
△	R012	06E22050S01	1.8K ohm
○	R013	06E22048S01	1K ohm
△	R013	06E22050S01	1.8K ohm
○	R014	06E22058S01	12K ohm
△	R014	06E22053S01	3.3K ohm
○	R015	06E22058S01	12K ohm
△	R015	06E22053S01	3.3K ohm
	R016	06E22048S01	1K ohm
	R017	06E22048S01	1K ohm
	R018	06E22051S01	2.2K ohm

	Symbol No.	Part No.	Description
	R019	06E22051S01	2.2K ohm
	R020	06E22035S01	18K ohm 1/8W
	R021	06E22041S01	100 ohm
	R022	06E22060S01	22K ohm
	R023	06E22048S01	1K ohm
	R025	06E22115S01	100 ohm 1/4W
	R027	06E20903S01	10K ohm
	R028	06E20903S01	10K ohm
	R029	06E20903S01	10K ohm
	R030	06E22051S01	2.2K ohm
	R032	06E22048S01	1K ohm
	R033	06E20903S01	10K ohm
	R034	06E22062S01	47K ohm
	R036	06E22048S01	1K ohm
	R037	06E22048S01	1K ohm
	R038	06E22037S01	100K ohm 1/8W
	R039	06E22041S01	100 ohm
	R040	06E23575S01	330K ohm
	R041	06E22058S01	12K ohm
	R042	06E20903S01	10K ohm
	R043	06E22066S01	220K ohm
	R044	06E22051S01	2.2K ohm
	R045	06E22062S01	47K ohm
	R046	06E22062S01	47K ohm
	R051	06E20903S01	10K ohm
	R201	06E22062S01	47K ohm
	R202	06E22062S01	47K ohm
	R203	06E22891S01	33K ohm 1/8W
	R204	06E22061S01	33K ohm
	R205	06E22921S01	47K ohm 1/8W
	R206	06E22062S01	47K ohm
	R207	06E22062S01	47K ohm
○	R208	06E22055S01	4.7K ohm
○	R211	06E22054S01	3.9K ohm
○	R212	06E22054S01	3.9K ohm
○	R213	06E22057S01	8.2K ohm
○	R214	06E22057S01	8.2K ohm
○	R215	06E20851S01	43K ohm
	R218	06E20903S01	10K ohm
	R219	06E20903S01	10K ohm
○	R220	06E22507S01	15K ohm
△	R220	06E20904S01	27K ohm
○	R221	06E22507S01	15K ohm
△	R221	06E20904S01	27K ohm
○	R222	06E22060S01	22K ohm
○	R223	06E22060S01	22K ohm
○	R224	06E22042S01	220 ohm
○	R225	06E22042S01	220 ohm
△	R226	06E24189S01	150 ohm

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

Symbol No.	Part No.	Description
△	R227	06E24189S01	150 ohm
	R228	06E22060S01	22K ohm
	R229	06E22060S01	22K ohm
	R230	06E22041S01	100 ohm
	R231	06E22041S01	100 ohm
○	R232	06E22926S01	7.5K ohm
△	R232	06E22055S01	4.7K ohm
○	R233	06E22926S01	7.5K ohm
△	R233	06E22055S01	4.7K ohm
○	R234	06E22926S01	7.5K ohm
△	R234	06E22055S01	4.7K ohm
○	R235	06E22926S01	7.5K ohm
△	R235	06E22055S01	4.7K ohm
	R236	06E22060S01	22K ohm
	R237	06E22060S01	22K ohm
	R238	06E22060S01	22K ohm
	R239	06E22060S01	22K ohm
	R240	06E22051S01	2.2K ohm
	R241	06E22504S01	2.2K ohm 1/8W
	R242	06E22051S01	2.2K ohm
	R243	06E22504S01	2.2K ohm 1/8W
	R244	06E22042S01	220 ohm
	R245	06E22033S01	4.7K ohm 1/8W
	R509	06E22058S01	12K ohm
	R510	06E20903S01	10K ohm
	R511	06E20903S01	10K ohm
	R512	06E20903S01	10K ohm
	R513	06E20903S01	10K ohm
○	R514	06E22053S01	3.3K ohm
○	R515	06E22051S01	2.2K ohm
○	R516	06E22041S01	100 ohm
○	R518	06E20903S01	10K ohm
○	R519	06E22060S01	22K ohm
○	R520	06E22060S01	22K ohm
	R521	06E22060S01	22K ohm
	R522	06E22055S01	4.7K ohm
○	R523	06E22051S01	2.2K ohm
	R524	06E22052S01	2.7K ohm
	R525	06E22656S01	6.8K ohm 1/8W
○	R526	06E22055S01	4.7K ohm
	R527	06E22036S01	22K ohm 1/8W
	R528	06E22062S01	47K ohm
	R529	06E22048S01	1K ohm
	R530	06E22048S01	1K ohm
	R533	06E22065S01	100K ohm
	R534	06E22066S01	220K ohm
	R535	06E22921S01	47K ohm 1/8W
	R536	06E22030S01	1K ohm 1/8W
	R537	06E22062S01	47K ohm

Symbol No.	Part No.	Description
	R538	06E22048S01	1K ohm
	R539	06E22048S01	1K ohm
	R540	06E22048S01	1K ohm
	R541	06E22048S01	1K ohm
	R542	06E22062S01	47K ohm
	R543	06E26014S01	10K ohm 1/8W
	R544	06E22065S01	100K ohm
○	R545	06E22546S01	51K ohm
△	R545	06E23573S01	82K ohm
	R546	06E22048S01	1K ohm
○	R548	06E20752S01	220 ohm 1/4W
○	R550	06E20903S01	10K ohm
○	R551	06E20903S01	10K ohm
	R554	06E22062S01	47K ohm
	R555	06E22921S01	47K ohm 1/8W
	R556	06E20752S01	220 ohm 1/4W
	R557	06E22060S01	22K ohm
	R558	06E22036S01	22K ohm 1/8W
	R559	06E22060S01	22K ohm
	R801	06E26014S01	10K ohm 1/8W
	R802	06E22075S01	1.5K ohm 1/4W
	R803	06E22075S01	1.5K ohm 1/4W
	R804	06E22548S01	470 ohm 1/4W
	R805	06E23734S01	750 ohm 1/8W
	R806	06E23859S01	390 ohm 1/4W
	R808	06E23596S01	8.2 ohm 1/4W
	R809	06E23596S01	8.2 ohm 1/4W
	R810	06E23596S01	8.2 ohm 1/4W
	R811	06E20903S01	10K ohm
	R812	06E20903S01	10K ohm
	R813	06E20903S01	10K ohm
	R814	06E22076S01	2.2K ohm 1/4W
	R815	06E20903S01	10K ohm
	R816	06E22075S01	1.5K ohm 1/4W
	R817	06E22033S01	4.7K ohm 1/8W
	R818	06E22033S01	4.7K ohm 1/8W
	R819	06E22032S01	3.9K ohm 1/8W
	R820	06E22051S01	2.2K ohm
	R821	06E20903S01	10K ohm
	R822	06E22030S01	1K ohm 1/8W
	R823	06E26014S01	10K ohm 1/8W
	R824	06E23596S01	8.2 ohm 1/4W
	R825	06E22075S01	1.5K ohm 1/4W
○	VR201	18E20754S01	Variable, 10K ohm
○	VR202	18E20754S01	Variable, 10K ohm

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

	Symbol No.	Part No.	Description
	Front P.W.Board		
	IC's		
	IC401	51T55492W01	LC75850W
○	IC402	51T95040W01	SBX8035F
	Transistor		
	Q401	48E10426S01	CP., DTC124EK
	Diodes		
	D401	48E10946S01	CP., DA204K
	D402	48E10946S01	CP., DA204K
	D403	48E10946S01	CP., DA204K
	D404	48E10946S01	CP., DA204K
	Lamps		
○	PL401	65T85125W05	9V-100mA
△	PL401	65T75231W01	9V-85mA
	PL404	65T75233W01	CP., 6V-80mA
	PL405	65T75233W01	CP., 6V-80mA
	PL406	65T75233W01	CP., 6V-80mA
	PL407	65T75233W01	CP., 6V-80mA
	LED's		
	LD401	48T65477W02	CP., SML-010LTT87 (RED)
	LD402	48T65477W03	CP., SML-010PTT87 (GRN)
	LD403	48T65477W03	CP., SML-010PTT87 (GRN)
	LD404	48T65477W03	CP., SML-010PTT87 (GRN)
	LD405	48T65477W02	CP., SML-010LTT87 (RED)
	Switches		
○	SW401	40T75234W01	Tact, SKQNAC (PWR/R.SENSOR/INTLZ)
△	SW401	40T75234W01	Tact, SKQNAC (PWR/INTLZ)
	SW402	40E23611S01	Tact, CP. EVQPJU04K (UP)
	SW403	40T75234W01	Tact, SKQNAC (REW/DN)
	SW404	40E23611S01	Tact, CP. EVQPJU04K (MODE/LOUD)
	SW405	40E23611S01	Tact, CP. EVQPJU04K (DOWN)
	SW406	40T75234W01	Tact, SKQNAC (TUNE/A.ME/PLAY/PAUSE)

	Symbol No.	Part No.	Description
	SW407	40T75234W01	Tact, SKQNAC (EJECT)
	SW408	40T75234W01	Tact, SKQNAC (UP/FF)
	SW409	40T75234W01	Tact, SKQNAC (SOURCE)
○	SW410	40T75234W01	Tact, SKQNAC (BAND/PROG/TITLE)
△	SW410	40T75234W01	Tact, SKQNAC (BAND/PROG)
	SW411	40T75234W01	Tact, SKQNAC (AF)
	SW412	40T75234W01	Tact, SKQNAC (T.INFO)
○	SW413	40T75234W01	Tact, SKQNAC (NEWS/1/NR B)
△	SW413	40T75234W01	Tact, SKQNAC (NEWS/1)
	SW414	40T75234W01	Tact, SKQNAC (PTY/2/P.S. DN)
	SW415	40T75234W01	Tact, SKQNAC (3/P.S. UP)
	SW416	40T75234W01	Tact, SKQNAC (F)
	SW417	40T75234W01	Tact, SKQNAC (SCAN/6)
	SW418	40T75234W01	Tact, SKQNAC (RPT/5)
	SW419	40T75234W01	Tact, SKQNAC (M.I.X./4/B. SKIP)
	Capacitors		
	C401	08E22085S01	CP., 0.022µF
	E401	23T25191W42	CP. ELY., 22µF / 6.3V
	C402	08E08423S06	CP., 680pF
	Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
	R401	06E21164S01	1.5K ohm
	R402	06E22051S01	2.2K ohm
	R403	06E22053S01	3.3K ohm
	R404	06E22111S01	5.6K ohm
	R405	06E20903S01	10K ohm
	R406	06E21164S01	1.5K ohm
	R407	06E22051S01	2.2K ohm
	R408	06E22053S01	3.3K ohm
	R409	06E22111S01	5.6K ohm
	R410	06E20903S01	10K ohm
	R411	06E21164S01	1.5K ohm
	R412	06E22051S01	2.2K ohm
	R413	06E22053S01	3.3K ohm
	R414	06E22111S01	5.6K ohm
	R415	06E20903S01	10K ohm
	R416	06E22061S01	33K ohm
	R417	06E20903S01	10K ohm
	R418	06E20903S01	10K ohm
	R419	06E20903S01	10K ohm
	R420	06E20903S01	10K ohm
	R421	06E23574S01	180K ohm
	R422	06E23574S01	180K ohm
	R423	06E22048S01	1K ohm
	R424	06E22048S01	1K ohm

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

	Symbol No.	Part No.	Description
	R425	06E22048S01	1K ohm
	R427	06E22048S01	1K ohm
	R428	06E22062S01	47K ohm
	R430	06E23859S01	390 ohm 1/4W
	R431	06E23858S01	15 ohm 1/4W
○	R432	06E22048S01	1K ohm
	R434	06E23264S01	24 ohm 1/4W
	R435	06E22114S01	27 ohm 1/4W
	R436	06E22114S01	27 ohm 1/4W
	R437	06E22114S01	27 ohm 1/4W
	R438	06E23860S01	3.9K ohm 1/4W
	R439	06E23859S01	390 ohm 1/4W
○	R440	06E22048S01	1K ohm
	R441	06E23859S01	390 ohm 1/4W
	R442	06E23859S01	390 ohm 1/4W
○	R443	06E27623S01	4.3K ohm 1/8W
△	R443	06E22032S01	3.9K ohm 1/8W
○	R444	06E27624S01	6.2K ohm 1/8W
△	R444	06E27736S01	7.5K ohm 1/8W
	R447	06E23859S01	390 ohm 1/4W
	R448	06E23859S01	390 ohm 1/4W
	R449	06E22048S01	1K ohm
	R451	06E23860S01	3.9K ohm 1/4W

GR Control P.W.Board

IC's

	IC3101	51T64606F02	TA7705F
	IC3102	51T75010W01	BA3703F
	IC3501	51T75628W01	BA6285FP

Transistors

	Q3501	48T84366F05	2SB1243
	Q3502	48T62967F06	CP., DTC114YK
	Q3503	48T62967F06	CP., DTC114YK
	Q3504	48T83835F03	2SD1859

Diodes

	D3101	48T81063F01	CP., MA159
	D3501	48T81063F01	CP., MA159
	D3502	48T81063F01	CP., MA159
	ZD3501	48T83128F11	Zener, HZS7A2L

Symbol No.	Part No.	Description

Capacitors

E3101	23S75372W02	ELY.,	100μF / 10V
E3102	23S75372W04	ELY.,	10μF / 16V
E3103	23S75372W02	ELY.,	100μF / 10V
E3104	23S75372W07	ELY.,	47μF / 16V
C3105	08S72783F31	CP.,	470pF
E3105	23S75372W09	ELY.,	4.7μF / 35V
C3106	08S72783F31	CP.,	470pF
E3106	23S75372W09	ELY.,	4.7μF / 35V
C3107	08S72783F31	CP.,	470pF
E3107	23S75372W15	ELY.,	1μF / 50V
C3108	08S72783F31	CP.,	470pF
E3108	23S75372W04	ELY.,	10μF / 16V
C3109	08S53332F48	CP.,	0.012μF
C3110	08S53332F48	CP.,	0.012μF
C3111	08S65128F35	CP.,	100pF
C3112	08S35374W01	CP.,	0.1μF
C3113	08S82122F59	CP.,	820pF
E3501	23S75372W18	ELY.,	100μF / 25V
C3502	08S65128F76	CP.,	0.1μF
C3503	08S65128F76	CP.,	0.1μF

Resistors

(All resistors are chip 1/10W±5% unless otherwise noted.)

R3101	06S53330F32	130 ohm 1/8W
R3102	06S64996F15	360K ohm
R3103	06S64995F81	15K ohm
R3104	06S53330F81	15K ohm 1/8W
R3105	06S53330F32	130 ohm 1/8W
R3106	06S64995F81	15K ohm
R3107	06S64995F81	15K ohm
R3108	06S64996F15	360K ohm
R3109	06S53330F29	100 ohm 1/8W
R3110	06S53330F65	3.3K ohm 1/8W
R3111	06S53330F65	3.3K ohm 1/8W
R3112	06S53330F85	22K ohm 1/8W
R3113	06S53330F85	22K ohm 1/8W
R3116	06S64995F85	22K ohm
R3117	06S64996F01	91K ohm
R3118	06S64995F95	56K ohm
R3119	06S64995F35	180 ohm
R3507	06S70072F41	330 ohm 1/4W
R3508	06S70072F41	330 ohm 1/4W
R3509	06S64995F77	10K ohm
R3510	06S70072F60	2K ohm 1/4W
R3511	06S70072F60	2K ohm 1/4W
R3512	06S53331F01	91K ohm 1/8W
R3513	06S53331F01	91K ohm 1/8W

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

	Symbol No.	Part No.	Description
	R3514	06S70072F53	1K ohm 1/4W
	R3515	06S81094F09	M.F., 4.7 ohm 1/2W

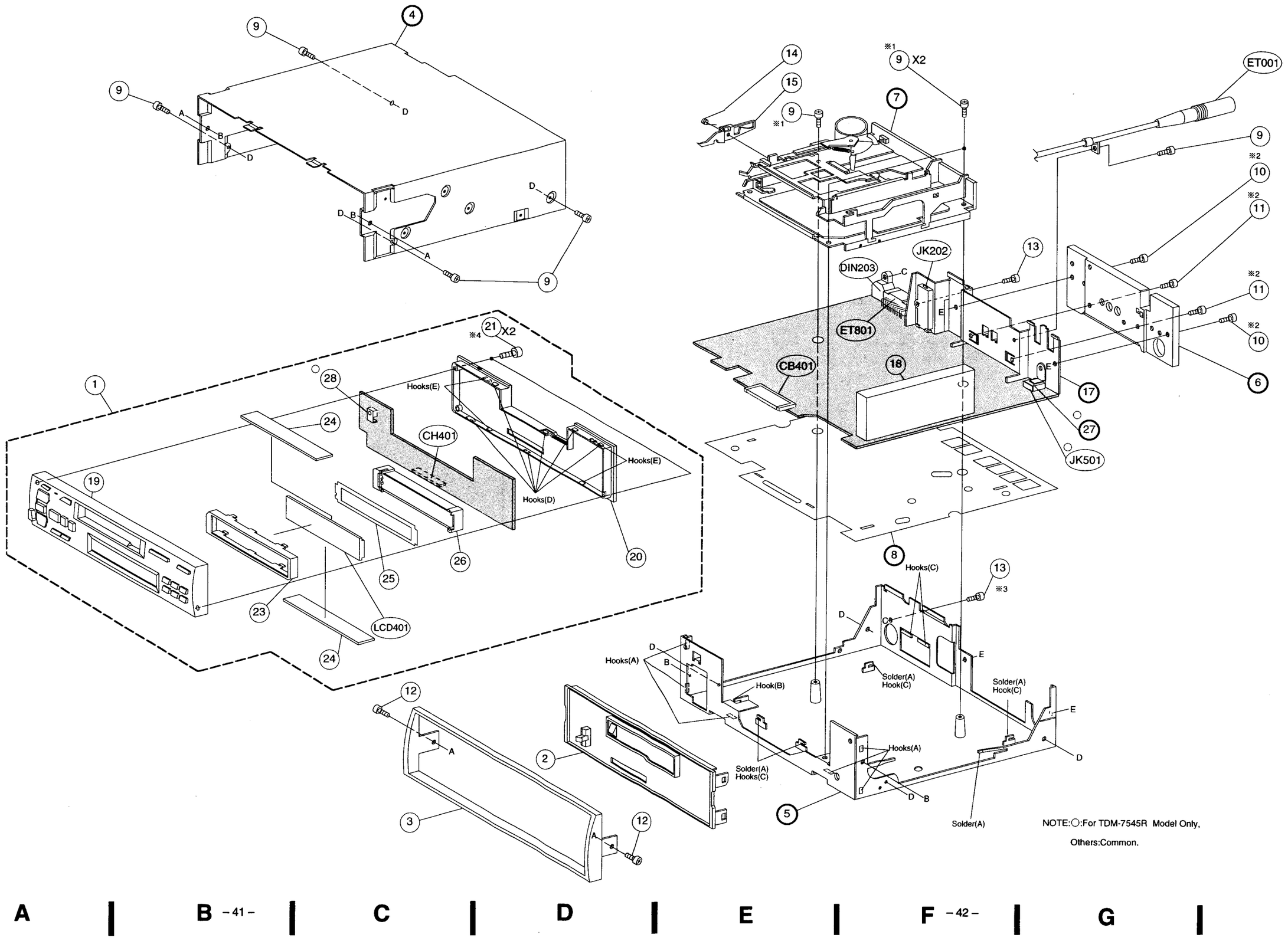
Miscellaneous

	CB401	09T85299W16	16P Connector
	CH401	09T85298W16	16P Connector
	DIN203	09T55493W02	DIN Connector 8P
	ET001	09E25398S01	Assy., Antenna Receptacle
	ET801	09E23591S01	Speaker Output & Power Supply Connector
	HD3101	88T95125W02	Assy., Head
	JK202	09T15335Y01	Rear Output RCA Connector
○	JK501	09E27608S01	Remote Control Interface Connector
○	LCD401	65T95241W03	LCD Display
△	LCD401	65T85130W04	LCD. Display
	M3501	01V94700W88	Assy., Main Motor (13.2V-95mA)
	M3502	01V91700W81	Assy., Sub Motor (7V-370mA)
	PT3501	51T63433F03	Sensor, Photo ON2170-R2
	PT3502	51T63433F03	Sensor, Photo ON2170-R2
	SW3501	40T15222W01	Switch, Detector (PACK IN)
	SW3502	40T15382W02	Switch, Detector SPPB32 (PAUSE)
	SW3503	40T15382W02	Switch, Detector SPPB32 (MODE)
	SW3504	40T15382W02	Switch, Detector SPPB32 (METAL)

Symbol No.	Part No.	Description

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

Exploded View (Cabinet)



NOTE:○:For TDM-7545R Model Only,
Others:Common.

A | B -41- | C | D | E | F -42- | G

Cabinet Assembly Parts List

NOTE:Parts without part number are not supplied.

Symbol No.		Index	Part No.	Description
○	1	3-A	01E27447S01	Assy., Nose Unit
△	1	3-A	01E27444S01	Assy., Nose Unit
	2	5-D	13E27728S01	Assy., Front Escutcheon
	3	5-C	33E27729S01	Assy., Face Plate
	9		03E09416S05	Screw, MCH-TPT (M2.6X6)
	10		03E22117S01	Screw, MCH-TPT (M2.6X8)
	11	2-G	03E22118S01	Screw, MCH-TPT (M2.6X14)
	12		03E22133S01	Screw, MCH-TPT (M2.6X6)
	13		03E27618S01	Screw, TPG-TPT (M2.6X8)
	14	1-E	41E27727S01	Spring, Lever Door
	15	1-E	45E27738S01	Lever, Door
	18	3-F	77E27449S01	FM/MW/LW Tuner Unit, MB4R6050 (FE001)
○	19	3-A	13E27551S01	Assy., Nosepiece
△	19	3-A	13E27550S01	Assy., Nosepiece
	20	4-D	13E26908S01	Nose, Bottom
	21	3-D	03E22134S01	Screw, TPG (M1.7X10)
	23	4-B	15E25405S01	Cover, LCD
	24		75E27730S01	Rubber, Electric
	25	4-C	26E27731S01	Reflector, Sheet
	26	4-C	01E25404S01	Assy., Case LCD
○	28	3-C	07E27732S01	Bracket, Remote

Symbol No.	Index	Part No.	Description

NOTE : ○: For TDM-7545R Model Only, △: For TDM-7544R Model Only, Others : Common.

Disassembly Instructions

1. Removal of Nose Unit

(1) Refer to the Owner's Manual (Part No. 68P91666W52/53).

2. Removal of Front Escutcheon

(1) After removal of Face Plate and Top Cover, remove six Hooks (A). ..... Hooks (A) (4-D, 5-F)

3. Removal of Cassette Deck

(1) After removal of Front Escutcheon, remove three screws No.9. ..... Screws No. 9 (※1) (1-E, 1-F)

(2) Remove a Hook (B). ..... Hook (B) (4-E)

(3) Disconnect the connector from Main P.W. Board.

4. Removal of Main P.W. Board

(1) After removal of Cassette Deck, remove four screws No. 10, 11, ... Screws No. 10, 11 (※2) (2-G, 3-G)
and remove the Heat Sink.

(2) Remove a screw No. 13. ..... Screw No. 13 (※3) (4-F)

(3) Remove five points of Solder (A) and six Hooks (C). ..... Solder (A) (4-F, 5-E, 5-F)
Hooks (C) (4-F, 5-E, 5-F)

(4) Main P.W. Board with Bracket IC can be removed completely.

5. Removal of Front P.W. Board

(1) After removal of Nose Unit, remove two screws No. 21. ..... Screws No. 21 (※4) (3-D)

(2) Remove six Hooks (D), and remove the Nosepiece. ..... Hooks (D) (3-D)

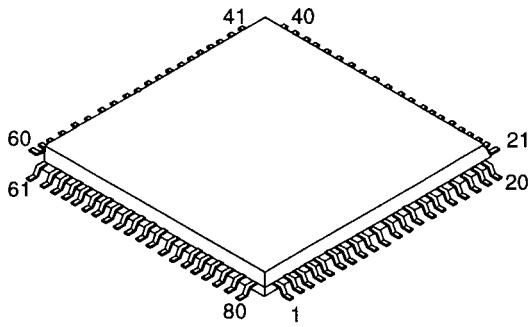
(3) Remove four Hooks (E). ..... Hooks (E) (3-C, 3-D)

NOTE: For the screws No., Hook and Solder, refer to the Exploded View (Cabinet).

Semi - Conductor Lead Identifications

NOTE : For the parts not mentioned, refer to the Schematic Diagram.

15162Y01 : IC501



PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	KEY A / D 3	I	22	A-MUTE	O	39	EV-DATA	O	61	○ REMOCON	I
2	KEY A / D 2	I	23	IF MUTE	O	40	PACK IN SW	I		△ NC	—
3	KEY A / D 1	I	24	○ NFP 1	O	41	FOR / $\overline{REV}$	O	62	ACC DET	I
4	GND	—		△ NC	—	42	METAL	I	63	BAT DET	I
5	NC	—	25	○ NFP 2	O	43	L.O.FAST	O	64	RDS CLOCK	I
6	NC	—		△ NC	—	44	M.S.DET	I	65	CHG BUS IN	I
7	V_{DD}	—	26	○ $\overline{DOLBY\ B}$	O	45	NC	—	66	CHG BUS OUT	O
8	MONI RXD	I		△ NC	—	46	NC	—	67	PULL-DOWN	—
9	MONI TXD	O	27	PAUSE SW	I	47	50k REF	O	68	V_{DD}	—
10	RDS SYNC	O	28	FOR RUN DET	I	48	$\overline{SD\ SW}$	O	69	X2	—
11	$\overline{LCD\ INH}$	O	29	MODE SW	I	49	AM SD	I	70	X1	—
12	LCD DATA	O	30	REV RUN DET	I	50	ALARM	O	71	GND	—
13	LCD CLK	O	31	MOTOR FAST	O	51	NC	—	72	NC	—
14	LCD CE	O	32	F-IN	O	52	FM SD / $\overline{ST\ IND.}$	I	73	GND	—
15	LED IND	O	33	GND	—	53	NC	—	74	AV_{DD}	—
16	NC	—	34	R-IN	O	54	NC	—	75	AV_{REF}	I
17	NC	—	35	O-MOTOR	O	55	PLL DI	I	76	S-METER	I
18	NC	—	36	○ SCL	O	56	PLL CLK	O	77	MULTIPATH	I
19	○ NOSE POWER	O		△ NC	—	57	PLL DO	O	78	SELECT	I
	△ NC	—	37	○ SDA	I/O	58	PLL CE	O	79	GND	—
20	NC	—		△ NC	—	59	RDS DATA	I	80	NOSE ON	I
21	POWER CONT	O	38	EV-CLK	O	60	$\overline{RESET}$	I			

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others :Common.

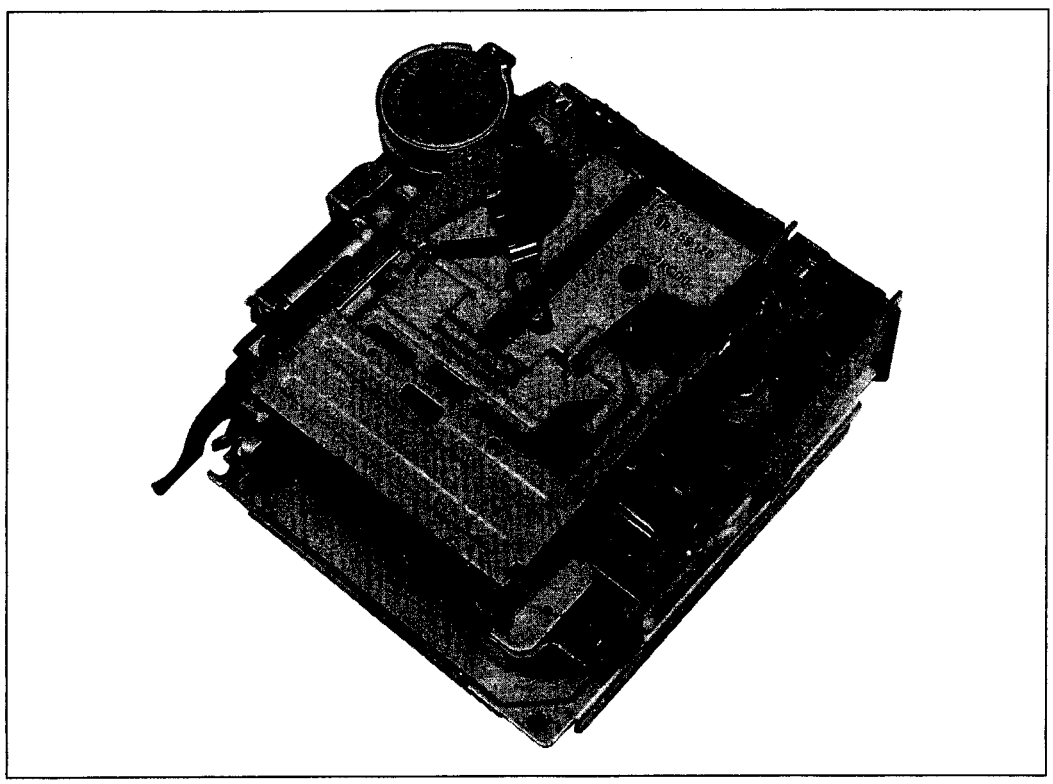
MEMO

ALPINE®

ALPI-00441

SERVICE MANUAL

Cassette Deck Mechanism



GR-S SERIES

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Exploded View (Cassette Deck Mechanism) ..... 23 to 24
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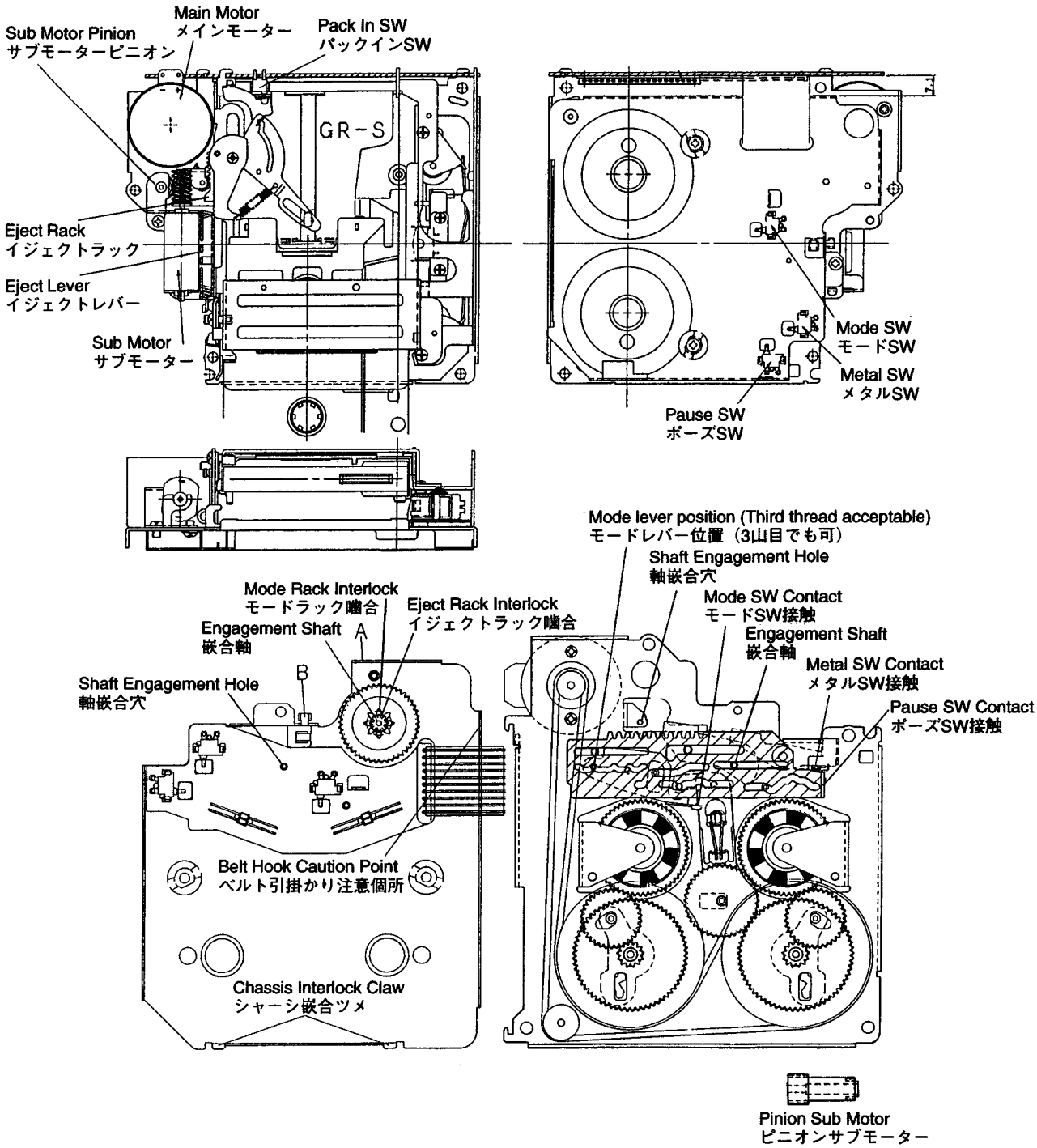
Basic Operation of GR-S Mechanism
GR-Sメカ基本動作



Mode rack engagement should be made so that normal engagement is obtained when an end of section A touches the chassis closely with the pinion sub motor inserted in place and rotated after temporary installation of the bottom cover. In this case, the sub motor wires should be positioned in the normal guide of the section B (should not be jammed). The metal lever should be installed by moving the switch contact section to inside of the mechanism as in GR-H.

モードラックの噛合せはボトムカバー仮装着後PINION SUB MOTORを正規位置に挿入して回転させる。
A部端面がシャーシと密着出来たとき正常な噛合い状態になったことを意味する。
又このときサブモータワイヤがB部の正規ガイド位置にあること。（挟み込みさせないこと。）
メタルレバーはGR-Hと同様にSW接触部をメカ内部に移動させて組み込むこと。

A. Loading
1. Insert a cassette pack.
2. PACK IN SW goes ON→OFF.
3. SUB motor rotates and the power is transferred to SUB MOTOR PINION, EJECT rack, and EJECT lever, and moves to the direction shown by the arrow.
4. After completion of the cassette pack loading, motion start of the mode lever is detected by checking ON→OFF of the PAUSE SW, and rotation of the SUB MOTOR stops once, and then the SUB MOTOR rotates in reverse direction until the PAUSE SW is ON again. After the stop of the SUB MOTOR, the main motor rotates.
5. When the main motor rotates, both reels rotate in the winding direction and eliminate slack of the tape at the PAUSE position. (Loading completion)

A. ローディング
1. カセットパックを挿入する。
2. PACK IN SWがON→OFFになる。
3. SUBモーターが回転してSUB MOTOR PINION、EJECTラック、EJECTレバーと動力が伝達し、矢印方向へ移動する。
4. カセットパック装着完了後、モードレバーが動き始めたことを、PAUSE SWがON→OFFすることで、検知しSUB MOTORの回転を一旦停止させ、再度PAUSE SWがONするまで逆回転させる、SUB MOTOR停止後メインモーターを回転させる。
5. メインモーターの回転により、両リールを巻き取り方向に回転させ、テープのタルミをPAUSE位置でなくする。（ローディング完了）

B. Play
1. Rotation of the main motor stops and the SUB MOTOR rotates, thereby moving the mode lever to the PLAY position.
2. Motion of the mode lever to the PLAY position is detected by checking ON/OFF number of the mode SW and rotating direction of the sub motor.
3. After detection of the mode lever moved to the PLAY position, the SUB MOTOR rotation stops and the main motor rotates, thus entering the PLAY operation.

B. プレイ
1. メインモーターの回転を停止させ、SUB MOTORを回転させて、モードレバーをPLAY位置に移動させる。
2. モードレバーのプレイ位置への移動はモードSWのON/OFF回数とサブモーターの回転方向で検知する。
3. モードレバーがPLAY位置に移動したことを検知したら、SUB MOTORの回転を停止し、メインモーターを回転させてPLAY動作に入る。

C. PROG
1. With the PROG KEY SW ON, the SUB MOTOR rotates, and the mode lever moves to next PLAY position (NORMAL→REVERSE PLAY or REVERSE→NORMAL PLAY).
2. When the mode switch detects the next PLAY position, the SUB MOTOR rotation stops, and operation shifts to the PLAY.

C. PROG
1. PROG KEY SW ONにより、SUB MOTORを回転させ、モードレバーを次のPLAY位置（NORMAL→REVERSE PLAY又は、REVERSE→NORMAL PLAY）に移動させる。
2. モードSWが次のPLAY位置を検知したらSUB MOTORの回転を停止し、PLAYに移行する。

D. FF/REW (QUE/REVIEW)

1. With KEY ON, rotation of the main motor stops and the SUB MOTOR rotates to bring the mode lever to the specified position.
2. When the specified position is detected by counting ON/OFF number of the mode SW, the SUB MOTOR rotation stops, and the main motor rotates to perform tape fast winding operation.
   (According to the stop position of the mode lever, all of head position retreat, playback engagement releasing, pinch roller retreat, and FF gear engagement are kept.)

D. FF/REW (QUE/REVIEW)

1. KEY ONによりメインモーターの回転を停止し、SUB MOTORを回転させモードレバーを所定の位置に移動させる。
2. モードSWのON/OFF回数をカウントし、所定の位置を検知したらSUB MOTORの回転を停止し、メインモーターを回転させ、TAPE早送り動作を行う。
   （モードレバーの停止位置により、ヘッド位置後退、プレイ噛み合い切り離し、ピンチローラー後退、早送り歯車の噛み合いは、全て維持される。）

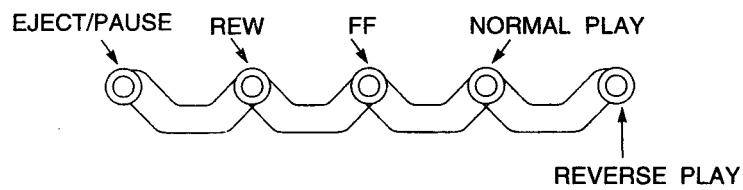
E. EJECT

1. With KEY ON, main motor rotation stops and SUB MOTOR rotates, thereby moving the mode lever to the EJECT/PAUSE position.
2. When the PAUSE SW turns on with the mode lever moved , the SUB MOTOR rotation stops, the main motor rotates to perform take up operations for both the reels.
3. When beginning of the reel slip is detected with tape slack eliminated, the main motor rotation stops and the sub motor rotates to move the EJECT lever in the eject direction.
4. When the PACK IN SW goes from OFF to ON, the SUB MOTOR rotation stops and the EJECT operation completes.

E. EJECT

1. KEY ONにより、メインモーターの回転を停止すると共に、SUB MOTORを回転させ、モードレバーをEJECT/PAUSE位置に移動させる。
2. モードレバーの移動は、PAUSE SWがONした所でSUB MOTORの回転を停止しメインモーターを回転させ両リールの巻き取り動作を行う。
3. テープタルミが無くなり、リールスリップが始まったことを、検知したらメインモーターの回転を停止し、SUB MOTORを回転させてEJECTレバーを排出方向に移動させる。
4. PACK IN SWがOFF→ONに切り換わったらSUB MOTORの回転を停止させEJECT完了となる。

Mode lever position
モードレバー位置



Mechanism operations are determined by positions of the mode lever shown above.
メカの動作は上記モードレバーの位置で決まる。

Operations of MODE SW and PAUSE SW

MODE SW、 PAUSE SWの動作

REV. PLAY

Mechanism operation shift メカ動作の移行		MODE SW	PAUSE SW
Loading	→Play	4	2
	FF		
	REW		
Play	→FF	3	0
	REW	2	0
	PROG	1	0
	EJECT	4	1 (OFF→ON)
FF	→Play	3	0
	REW	1	0
	PROG		
	EJECT	1	1 (OFF→ON)
REW	→Play	2	0
	FF	1	0
	PROG		
	EJECT	2	1 (OFF→ON)

ON→OFF number of above switches
上記SWのON→OFF回数

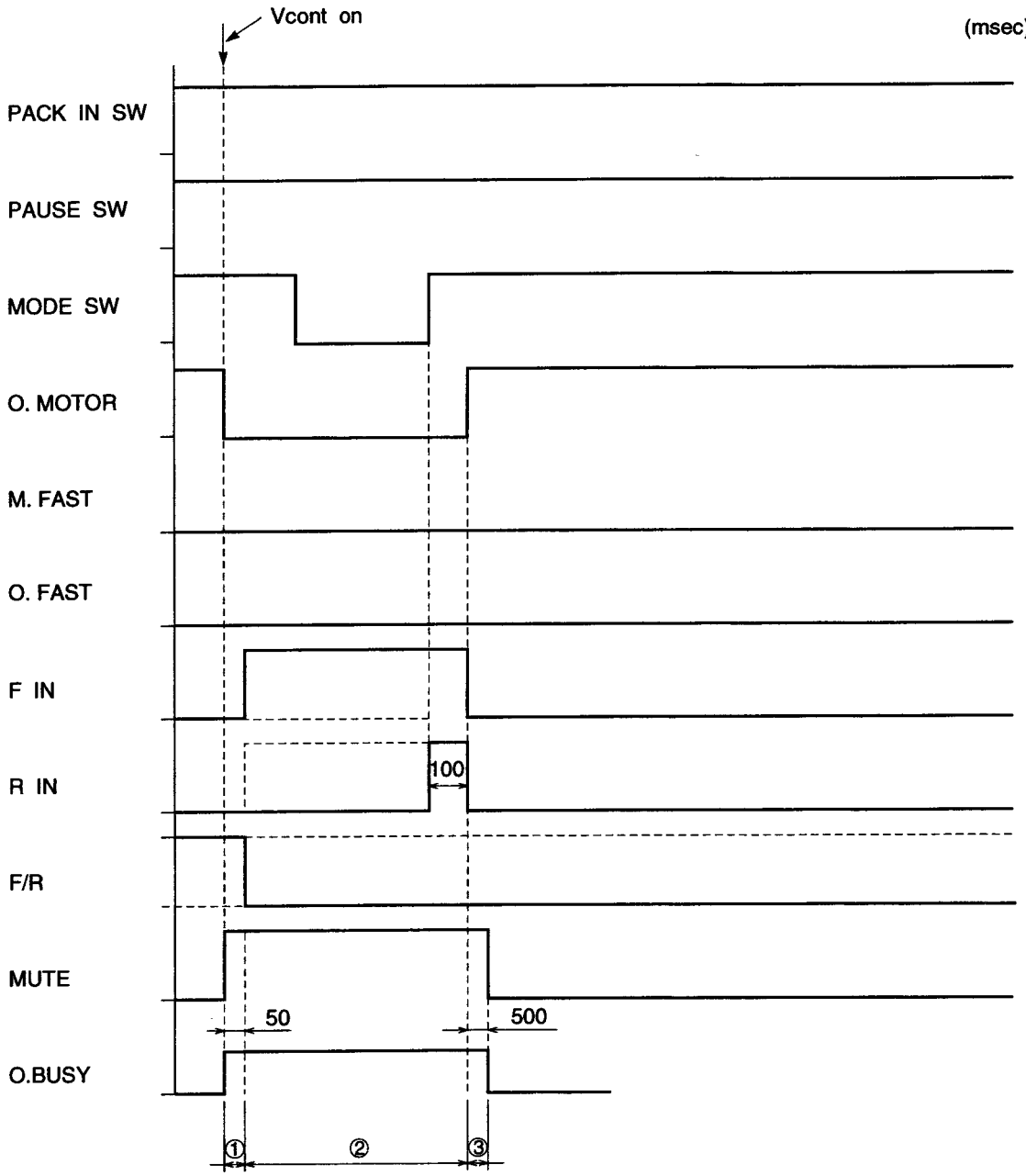
FOR. PLAY

Mechanism operation shift メカ動作の移行		MODE SW	PAUSE SW
Loading	→Play	3	2
	FF		
	REW		
Play	→FF	1	0
	REW	2	0
	PROG	1	0
	EJECT	3	1 (OFF→ON)
FF	→Play	1	0
	REW	1	0
	PROG		
	EJECT	2	1 (OFF→ON)
REW	→Play	2	0
	FF	1	0
	PROG		
	EJECT	1	1 (OFF→ON)

ON→OFF number of above switches
上記SWのON→OFF回数

Mechanism basic operation timing chart
メカニズム基本動作タイミングチャート

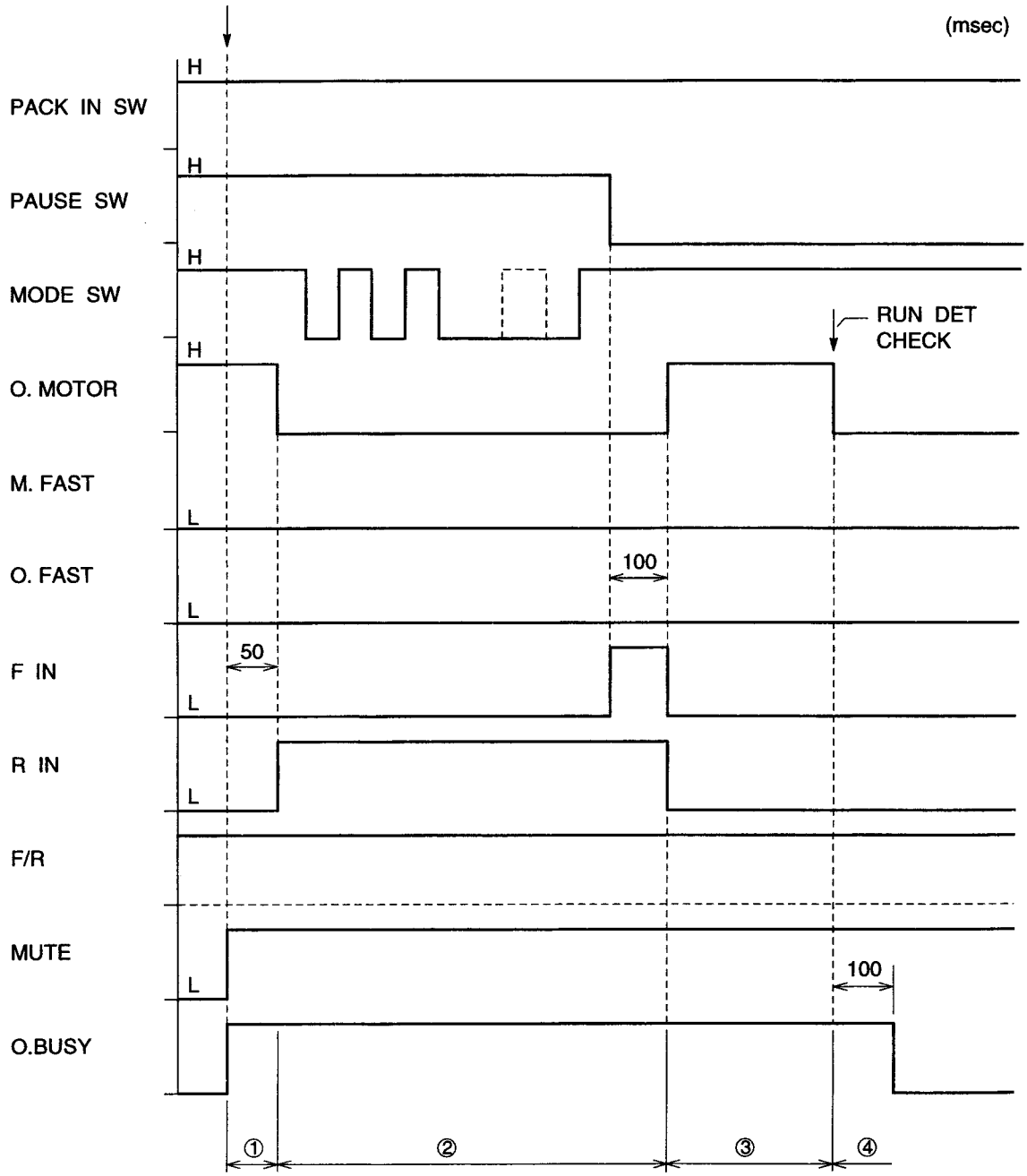
Shift MODE　　PLAY → PLAY (PROG)
移行モード　　PLAY → PLAY (PROG)



① Tape wind stop: Main motor stops.
② Mode lever shift: SUB MOTOR rotates, mode lever moves to a specified position and stops.
③ Mode determination: Muting until operation reaches a stable status.

① TAPE巻取り停止：MAIN MOTORを停止させる。
② MODE LEVER移動：SUB MOTORを回しMODE LEVERを目的の位置まで移動させ停止させる。
③ MODE確定：動作安定までMUTE。

Shift MODE　　PLAY → PAUSE
移行モード　　PLAY → PAUSE

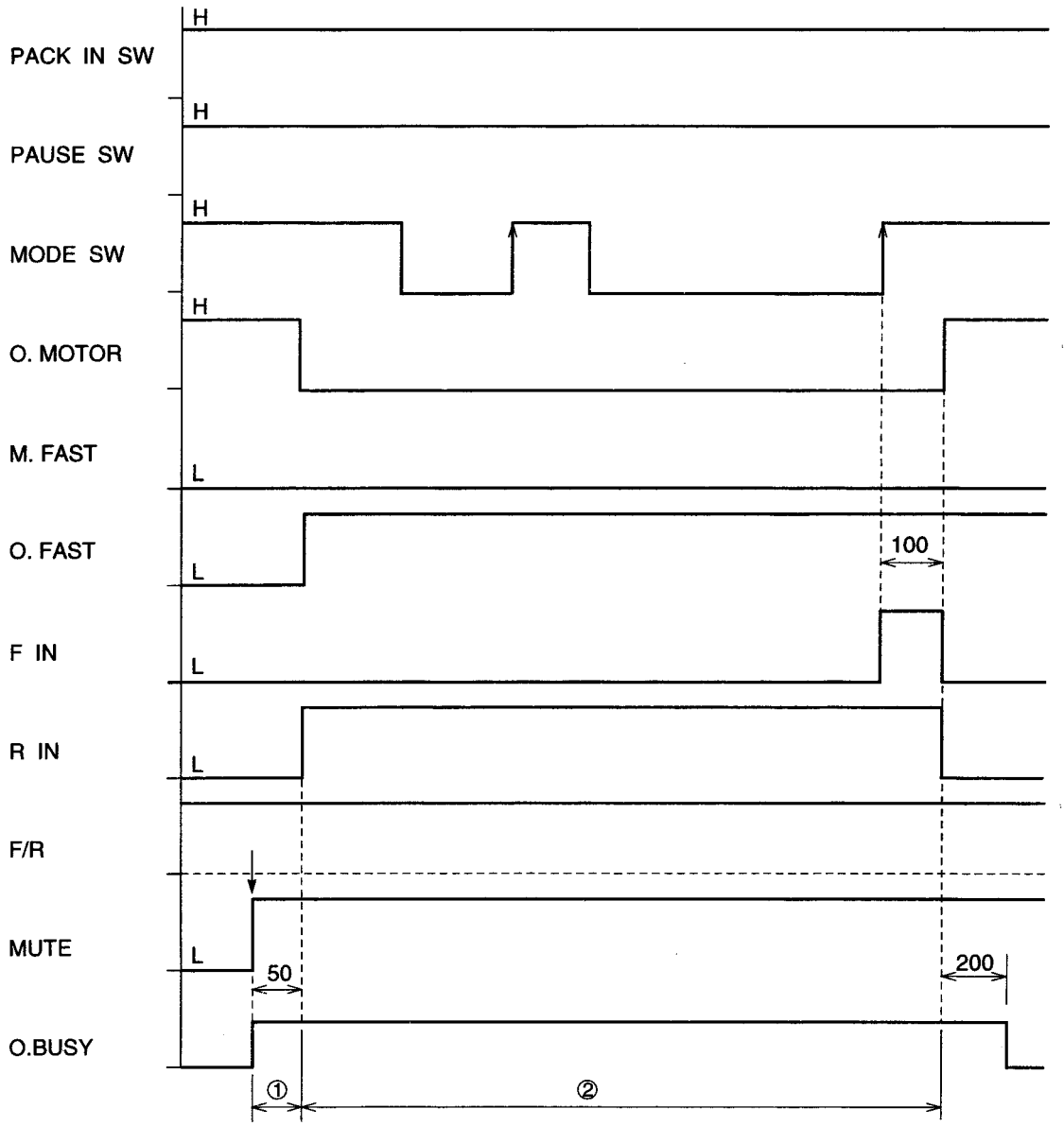


① Tape wind stop: Main motor stops.
② Mode lever shift: Sub motor rotates, mode lever moves to a specified position and stops.
③ Removal of tape slack: Both reel rotate in winding direction and eliminate tape slack.
④ Reel stop: Main motor stops when run det pulse reaches a specified value.

① TAPE巻取り停止：MAIN MOTOR停止
② MODE LEVER移動：SUB MOTORを回し、MODE LEVERを目的の位置まで移動させ停止させる。
③ TAPE弛み取り：両リールを巻取方向へ回転させ、TAPEの弛みを無くす。
④ リール停止：RUNDET PULSが設定値に達したらMAIN MOTORを停止させる。

Shift MODE　　PLAY → REW
移行モード　　PLAY → REW

(msec)

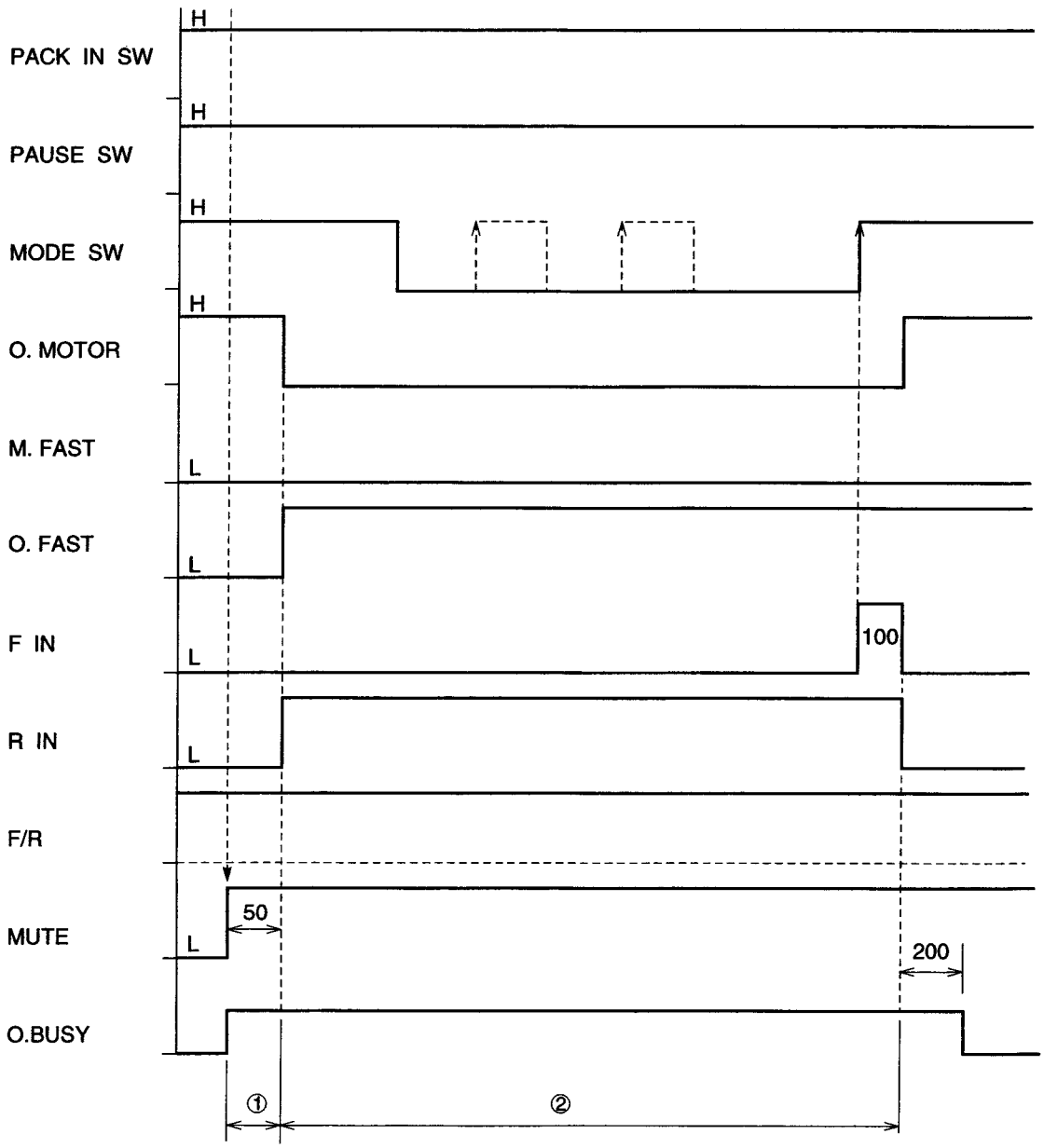


① Tape wind stop: Main motor stops.
② Mode lever shift: Sub motor rotates and mode lever moves to a specified position and stops.

① TAPE巻取り停止：MAIN MOTOR停止
② MODE LEVER移動：SUB MOTORを回しMODE LEVERを目的の位置まで移動させ停止させる。

Shift MODE　　PLAY → FF
移行モード　　PLAY → FF

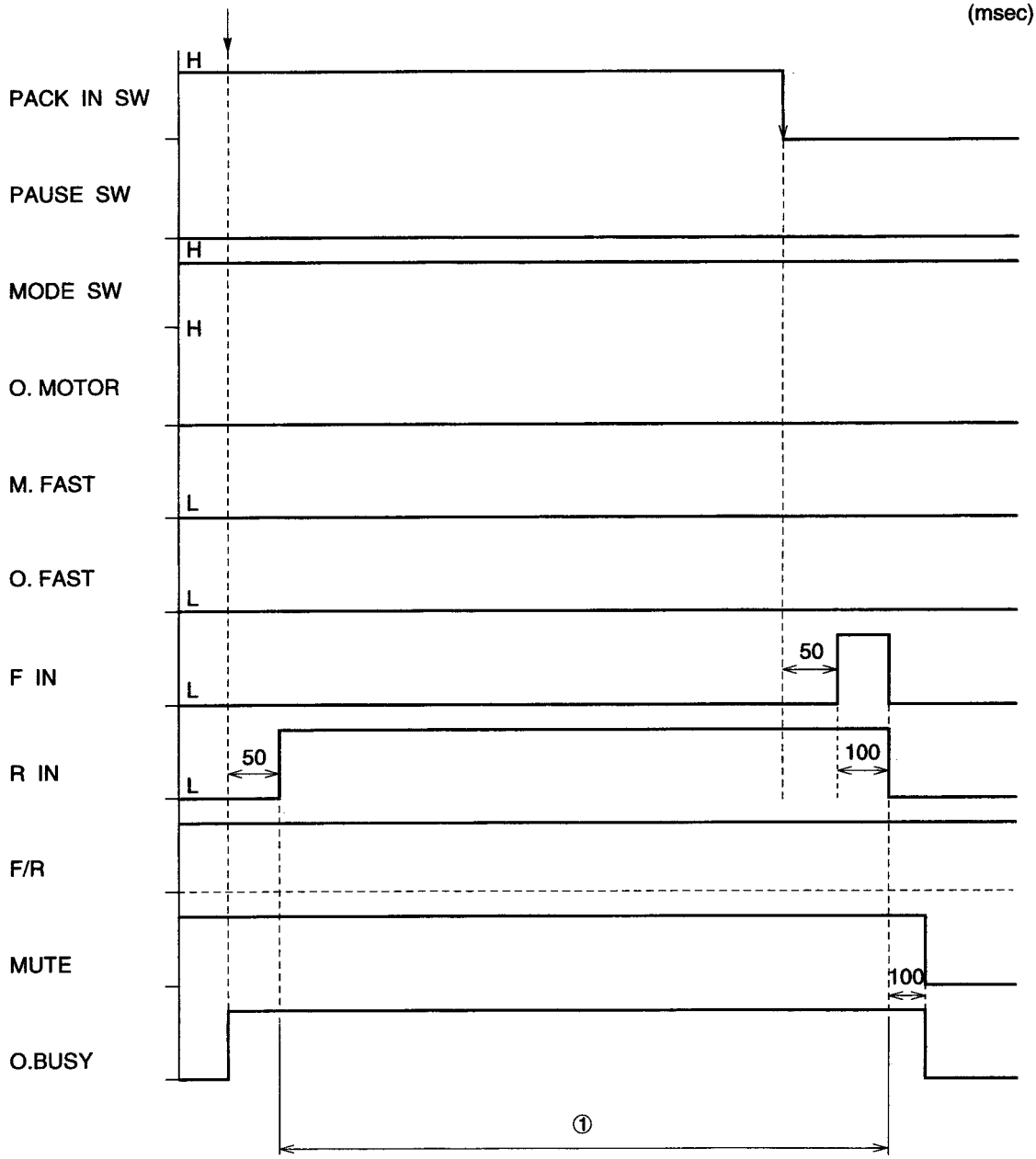
(msec)



① Tape wind stop: Main motor stops.
② Mode lever shift: Sub motor rotates and mode lever moves to a specified position and stops.

① TAPE巻取り停止：MAIN MOTOR停止
② MODE LEVER移動：SUB MOTORを回しMODE LEVERを目的の位置まで移動させ停止させる。

Shift MODE　　PAUSE → EJECT
移行モード　　PAUSE → EJECT



① Cassette pack eject: Rotates sub motor and lifts up the cassette holder.
Rotates the sub motor further to move slider forward and ejects the pack.

① カセットパック排出：SUB MOTORを回しCASSETTE HOLDERをリフトさせる。
さらにSUB MOTORを回しスライダーを手前に移動させPACKを排出させる。

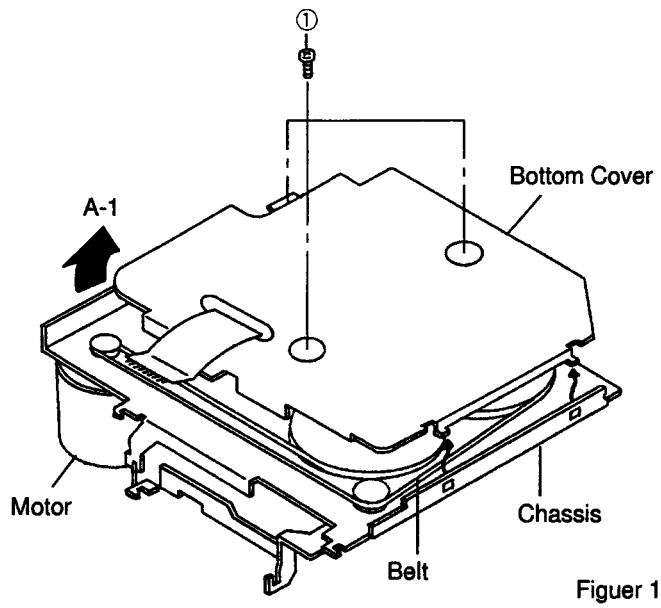
Disassembly, Assembly and Replacement of Functional Parts
機能部品の分解・組立及び交換方法

1. Disassembly and Assembly of Bottom Cover

(1) Turn the mechanism around as shown in Figure 1.
(2) Remove three screws ① as shown in Figure 1.
(3) Lift the bottom cover slowly from the position A-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
(4) Set the mechanism to pack down status and place the mode lever to the position shown in Figure 2-1.
(5) Press the metal switch lever in direction shown by the arrow (refer to Figure 2-2), insert the pinion sub motor shaft to the pinion sub motor hook hole, and insert the chassis engagement claws into the chassis engagement holes. (Check to see the sub motor wire is placed in the normal guide position of B section.)
(6) Rotate the pinion sub motor counterclockwise after insertion of the bottom cover, and check to see the end place of A section in Figure 2 is closely touched. (refer to Figure 3)
(7) Fix the screws that have been removed.
NOTE : ① When fixing the bottom cover, be careful to avoid damage by the belt.
② Fasten the three screws with a fastening torque of 6 kg.cm.

1. ボトムカバーの分解方法及び組立方法

(1) メカを裏返しにします。(図1参照)
(2) 3本のネジ①を外します。(図1参照)
(3) A-1部からボトムカバーをゆっくりと浮かし、切り起こしの嵌合部を外し、分解します。(図1参照)
(4) 組立時は、メカをバックDOWN状態にして、モードレバーの位置を図2-1の位置に合わせます。
(5) メタルSWレバーを矢印方向 (図2-2参照) に押し、SUB MOTOR嵌合軸をSUB MOTOR軸嵌合穴に挿入し、シャーシー嵌合ツメをシャーシー嵌合穴に挿入します。←ボトムカバー仮装着完了。
(この時、サブモーターワイヤーがB部正規ガイド位置にあること)
(6) ボトムカバー仮装着後SUB MOTORを左回りに回し、図2A部端面がシャーシと密着したことを確認します。(図3参照)
(7) 分解時に外したネジを止めます。
[注意] ① 組立時、ベルトに傷を付けない様に注意して下さい。
② 3本のネジは6kgcmのトルクで締め付けて下さい。



Figuer 1

Figure 2-1

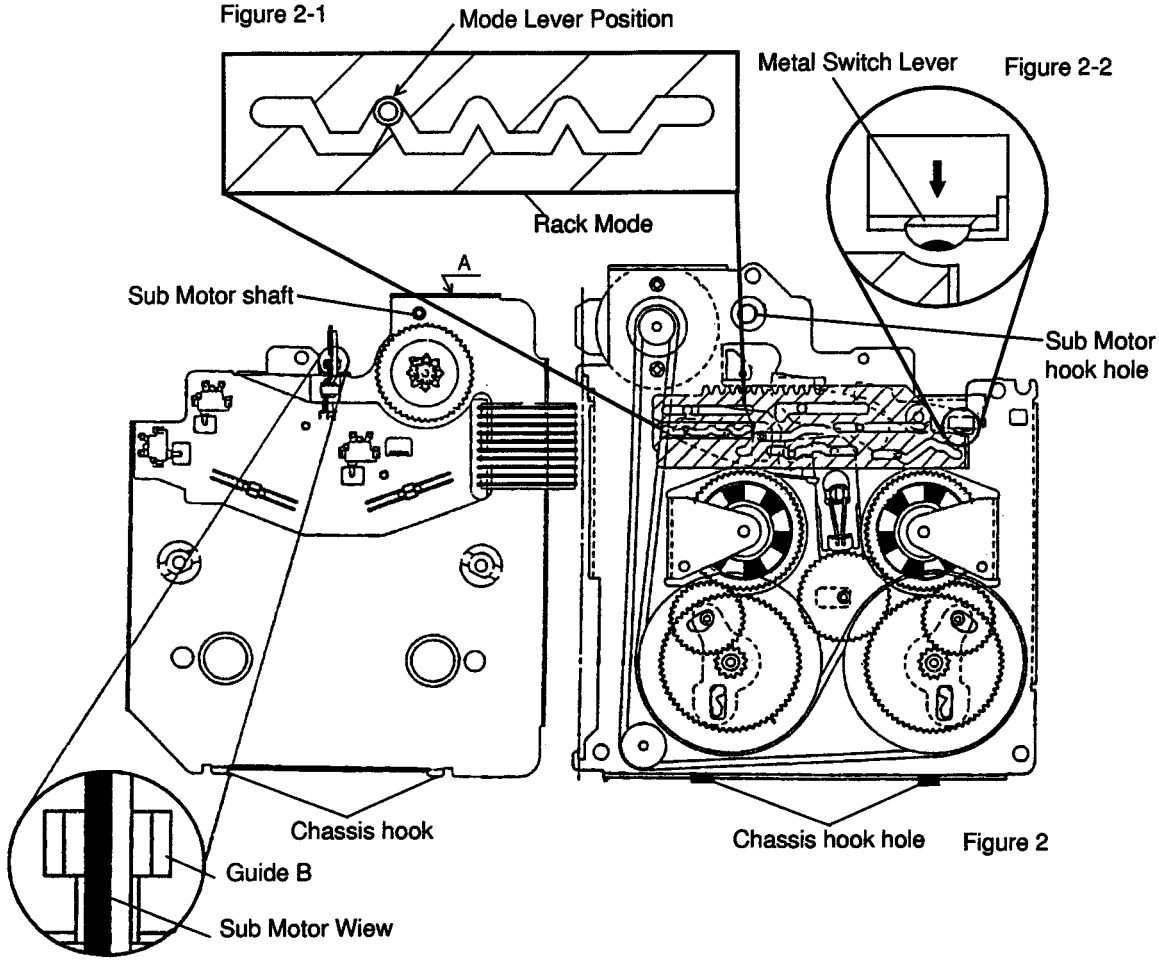


Figure 2-2

Figure 2

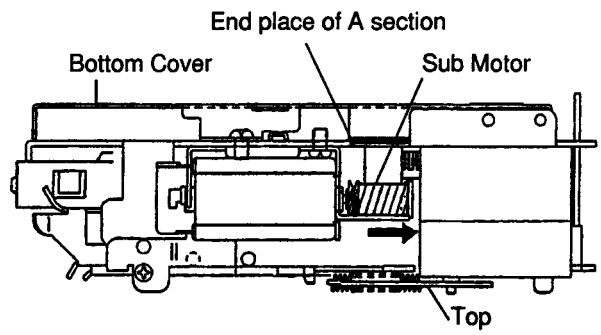


Figure 3

2. Replacement of the bottom cover mounting parts

2. ボトムカバーの取付部品の交換方法

a. Replacement of the inner gear/planet gear/sun gear

(1) Remove M1.2 lock washer ② as shown in Figure 4.

(2) Pull the eject pinion out of the inner gear and remove the inner gear, eject base pinion and sun gear as shown in Figure 4.

(3) Turn the eject base pinion, remove the three planet gear as shown in Figure 4.

(4) Apply the grease (PG-671) to the section B-1, and mount the inner gear/planet gear/sun gear following the removal steps in the reverse order. After replacement is smoothly. (Refer to Figure 6.)

NOTE : ① Do not reuse the used lock washer for remounting.
② Take care to avoid damage by piercing and tearing.
③ Do not forget insertion of planet gears. Check number of the gears also.

a. インナーギア／プラネットギア／サンギアの交換方法

(1) ロックワッシャー②（M1.2）を外します。(図4参照)

(2) イジェクトピニオンをインナーギアより引き抜き、インナーギア／イジェクトベースピニオン／サンギアの順に外します。(図4参照)

(3) イジェクトベースピニオンを裏返しにしてプラネットギア（3個）を外します。(図4参照)

(4) B-1部分にグリス（PG-671）を塗布し、取り外しの逆の手順で組み立てて下さい。尚交換後、ギアの回転がスムーズであるか確認して下さい。(図6参照)

[注意] ① 一度使用したロックワッシャーは組立時には使用しないで下さい。
② 口開き、めくれのない様に注意して下さい。
③ プラネットギアの挿入忘れ、不足のないこと。

b. Replacement of the photo sensor

(1) Remove eight solders 21 as shown in Figure 5.

(2) Remove the photo sensor from the photo P.C.Board as shown in Figure 5.

(3) Solder the legs so that the photo sensor is set as indicated by [ ] in Figure 5.

NOTE : ① When using the soldering iron, set the temperature of the soldering iron to 270° ±20℃and the soldering time to less than 3 seconds.
② Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damage.

b. フォトセンサーの交換方法

(1) 8ケ所の半田21を外し、フォトセンサーをフォト基板より外します。(図5参照)

(2) 良品のフォトセンサーを図中の[ ]と同じ方向になる様に半田付けします。(図5参照)

[注意] ① 半田ゴテを使用する際、半田ゴテ先温度270° ±20℃、半田付け時間3秒以下とする。
② ルーズ半田、ショート等のないこと。又、皮膜破れに注意すること。

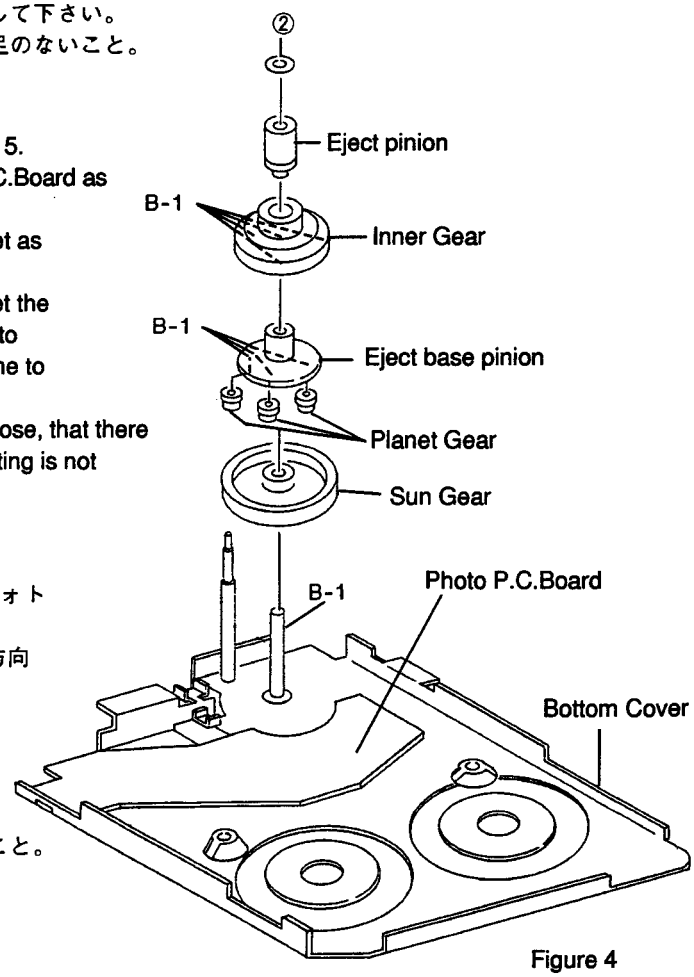


Figure 4

c. Replacement of the detector switch (Pause/Metal/Mode)

(1) Remove six solders 22 with which the switch is fixed as shown in Figure 5.

(2) Prepare the terminals of the switch of the new one as shown in Figure 6.

(3) After that, insert the switch into the photo P.C.Board, and solder the terminals.

NOTE : ① When using the soldering iron, refer to item 2-b to make sure that the temperature of the soldering iron and the soldering time are proper.

② Take care that the switch guide is properly fixed and straight.

c. 検出スイッチ（ポーズ・メタル・モード）の交換方法

(1) スイッチを止めている6ケ所の半田22をそれぞれ外します。(図5参照)

(2) 良品のスイッチの端子を水平に直します。(図6参照)

(3) フォト基板に差し込み、端子を半田付けします。

[注意] ① 項目2-bと同様に半田ゴテのコテ先温度、半田付け時間に注意すること。

② スイッチの浮き及び傾きがない様にすること。

3. Replacement of the mounting parts on the rear of the main chassis

3. メインシャーシー裏側取付部品の交換方法

a. Replacement of the belt

(1) After removing the bottom cover, remove the belt.

(2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 7.

NOTE : ① When fixing the belt, make sure that is not twisted or dirty.

② When removing the belt, do not turn up the front of chassis.

a. ベルトの交換方法

(1) ボトムカバーを外した後、ベルトを取り外します。

(2) 良品のベルトを無水アルコールでクリーニングしてから掛けます。(7図参照)

[注意] ① 取り付け時、ねじれ及び汚れがない様にすること。

② ベルトを取り外した時、シャーシーを表側にしないこと。

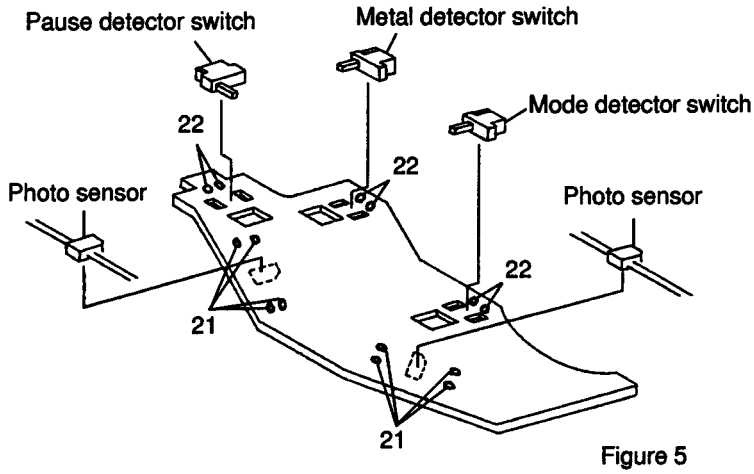


Figure 5

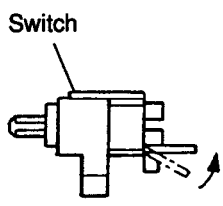


Figure 6

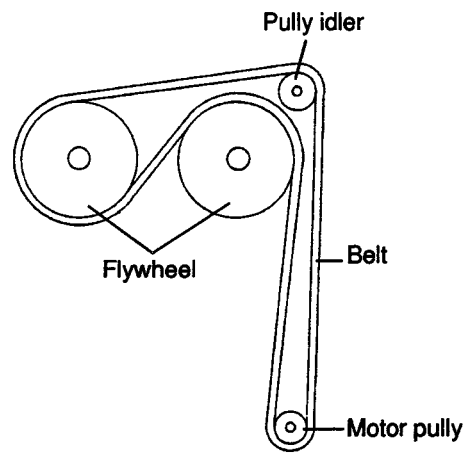


Figure 7

b. Replacement of the main motor
(1) After removing the belt, remove solder ⑫-1, and remove the wire flat (2P) from the control P.C.Board as shown in Figure 10.
(2) Remove two screws ⑦, and remove the main motor as shown in Figure 8.
(3) Mount the new motor following the removal steps in the reverse order.
NOTE : ① When using the soldering iron, set the temperature of the soldering iron to 320° ±20℃ and the soldering time to less than 3 seconds.
② Since the wire flat is very easily damaged, handle it with care.
③ Fasten the two screws with a fastening torque of 2kg.cm.

b. メインモーターの交換方法
(1) ベルトを外した後、半田⑫-1を外し、ワイヤーフラット（2P）をコントロール基板より外します。(図10参照)
(2) 2本のネジ⑦を外し、メインモーターを外します。(図8参照)
(3) 良品のメインモーターを取り外し方法の逆の手順で組み立てます。
[注意] ①半田ゴテを使用する際、半田ゴテ先温度320° ±30℃、半田付け時間3秒以下とする。
②ワイヤーフラットは損傷し易いので取扱いには十分注意すること。
③2本のネジは2kgcmのトルクで締め付けること。

c. Replacement of the flywheel
(1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑤ located between the flywheel and the chassis. (Refer to Figure 8)
(2) Fix the polyslider washer to the new flywheel and mount the flywheel to chassis.

c. フライホイールの交換方法
(1) ベルトを外した後、2個のフライホイールを引き抜きます。この時フライホイールとシャーシーの間にそれぞれ1個のポリスライダーワッシャー⑤がありますので紛失しない様に注意して下さい。(図8参照)
(2) 良品のフライホイールにポリスライダーワッシャーを取り付け、シャーシに取り付けます。

d. Replacement of the rack mode
(1) Remove M1.7 lock washer ③, and remove the rack mode as shown in Figure 8.
(2) Apply the molykote G paste to the section D-3, and mount the rack mode following the removal steps in the reverse order. (Refer to Figure 8)
NOTE : ① Check to see the rack mode can move left to right in its full stroke.
② Do not reuse the used lock washer for remounting.
③ Take care to avoid damage by piercing and tearing.

d. ラックモードの交換方法
(1) 2個のロックワッシャー③（M1.7）を外し、シャーシーより引き抜き、ラックモードを外します。(図8参照)
(2) 良品のラックモードのD-3部分にモリコートGペーストを塗布し、取り外しの逆の手順で取り付けます。
[注意] ①ラックモードは左右に全ストローク動作することを確認する。
②一度使用したロックワッシャーは組立時には使用しないで下さい。
③ロックワッシャー取り付け時、口開き、めくれのない様に注意すること。

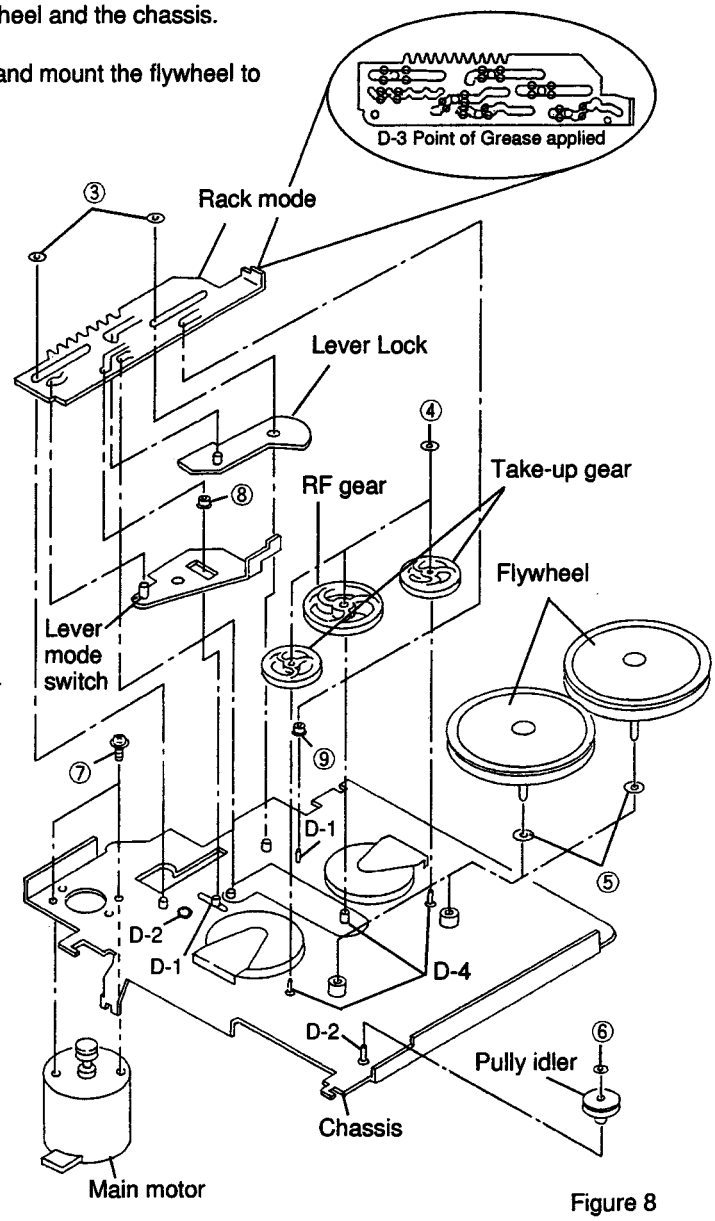


Figure 8

e. Replacement of the lever lock/lever mode switch/roller mode

(1) After removing the rack mode, remove the lever lock and lever mode switch. (Refer to Figure 8)

(2) Pull it up from the stud and remove the two roller mode ⑧, ⑨ as shown in Figure 8.

(3) Apply the molykote G paste to the section D-1, the grease (PG-671) to the section D-2 and mount the roller mode/lever mode switch/lever lock following the removal steps in the reverse order.

NOTE : ① Check to see the roller mode is inserted without fail.

e. レバーロック／レバーモードスイッチ／ローラーモードの交換方法

(1) ラックモードを外した後、レバーロック、レバーモードスイッチの順に引き抜きます。（図8参照）

(2) 2個のローラ-モード⑧､⑨をスタットより引き抜きます。(図8参照)

(3) D-1部分にモリコートGペースト、D-2部分にグリス（PG-671）を塗布し、取り外し方の逆の手順で取り付けます。

[注意] ① ローラーモードの挿入忘れがないこと。

f. Replacement of gears

f-1 Replacement of the RF gear

(1) Remove M1.2 lock washer④, pull it up from the stud and remove the gear as shown in Figure 8.

(2) Mount it, following the removal steps in the reverse order.

f-1 RFギアの交換方法

(1) ロックワッシャー④（M1.2）を外し、スタットより引き抜きギアを外します。(図8参照)

(2) 取り外し方の逆の手順で取り付けます。

f-2 Replacement of the take-up gear

(1) Remove M1.2 lock washer④, pull it up from the stud and remove the gear as shown in Figure 8.

(2) Mount it, following the removal steps in the reverse order.

NOTES on f-1 and f-2 :

① Do not reuse the used lock washer for remounting.

② Take care to avoid damage by piercing and tearing.

f-2 テイクアップギアの交換方法

(1) 2個のロックワッシャー④（M1.2）を外し、スタットより引き抜きギアを外します。(図8参照)

(2) 取り外し方の逆の手順で取り付けます。

[f1, f2の注意]

① 一度使用したロックワッシャーは組立時には使用しないで下さい。

② ロックワッシャー取り付け時、口開き、めくれのない様に注意すること。

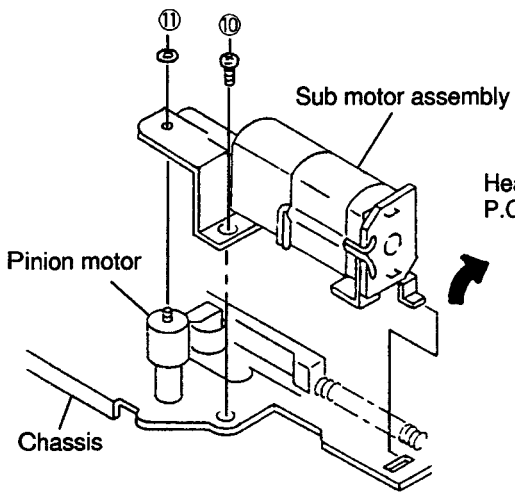


Figure 9

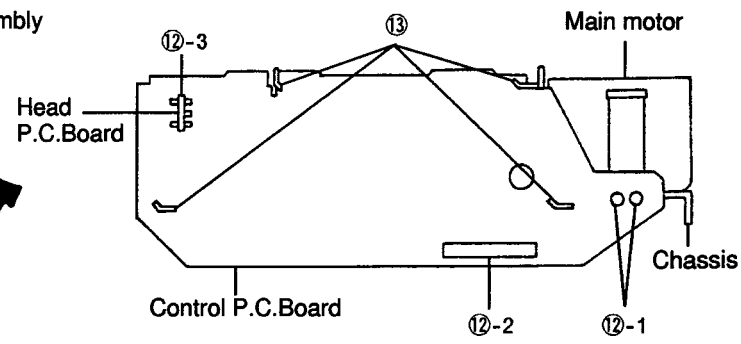


Figure 10

4. Replacement of the parts mounted on the front of the main chassis

4. メインシャーシ表側部品の交換方法

a. Replacement of the control P.C.Board

(1) Remove four solders ⑫ and remove the head P.C.Board and the two wire flat as shown in Figure 10.
(2) Remove four claws ⑬ and remove the P.C.Board as shown in Figure 10.
(3) After replacing the old P.C.Board with a new one, mount it following the removal steps in the reverse order.
NOTE : ① Since the wire flat is very easily damaged, handle it with care.
② When using the soldering iron, set the temperature of the soldering iron to 320° ±30℃ and the soldering time to less than 3 seconds, but solder point ⑫-3 to less than 1 second.
③ Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damage.

a. コントロール基板の交換方法

(1) 4ケ所の半田⑫を外し、ヘッド基板と2本のワイヤーフラット（2P)、(10P) をそれぞれ外します。(図10参照)
(2) 4ケ所のツメ⑬を外し、コントロール基板を外します。(図10参照)
(3) 良品のコントロール基板と交換後、取り外し方の逆の手順で基板を取り付けます。
[注意] ① ワイヤーフラットは損傷し易いので取扱いには十分注意すること。
② 半田ゴテを使用する際、半田ゴテ先温度320° ±30℃、半田付け時間3秒以下とする。
但し、⑫-3は1秒以下とする。
③ ルーズ半田、ショート等のないこと。

b. Replacement of the sub motor assembly

(1) Remove M1.2 lock washer ⑪ and one screw ⑩ as shown in Figure 9.
(2) Remove the sub motor assembly by pulling it up in the direction of the arrow as shown in Figure 9.
(3) Mount it, following the removal steps in the reverse order.
NOTE : ① Do not reuse the used lock washer for remounting.
② Take care to avoid damage by piercing and tearing.
③ Fasten the one screw with a fastening torque of 6kg.cm.

b. サブモーター組立の交換方法

(1) ロックワッシャー⑪ (M1.2) と1本のネジ⑩を外します。(図9参照)
(2) 図中の矢印の方向へ持ち上げながらサブモーター組立を外します。
(図9参照)
(3) 取り外し方の逆の手順で取り付けます。
[注意] ① 一度使用したロックワッシャーは組立時には使用しないで下さい。
② ロックワッシャー取り付け時、口開き、めくれのない様に注意すること。
③ ネジは6kgcmのトルクで締め付けること。

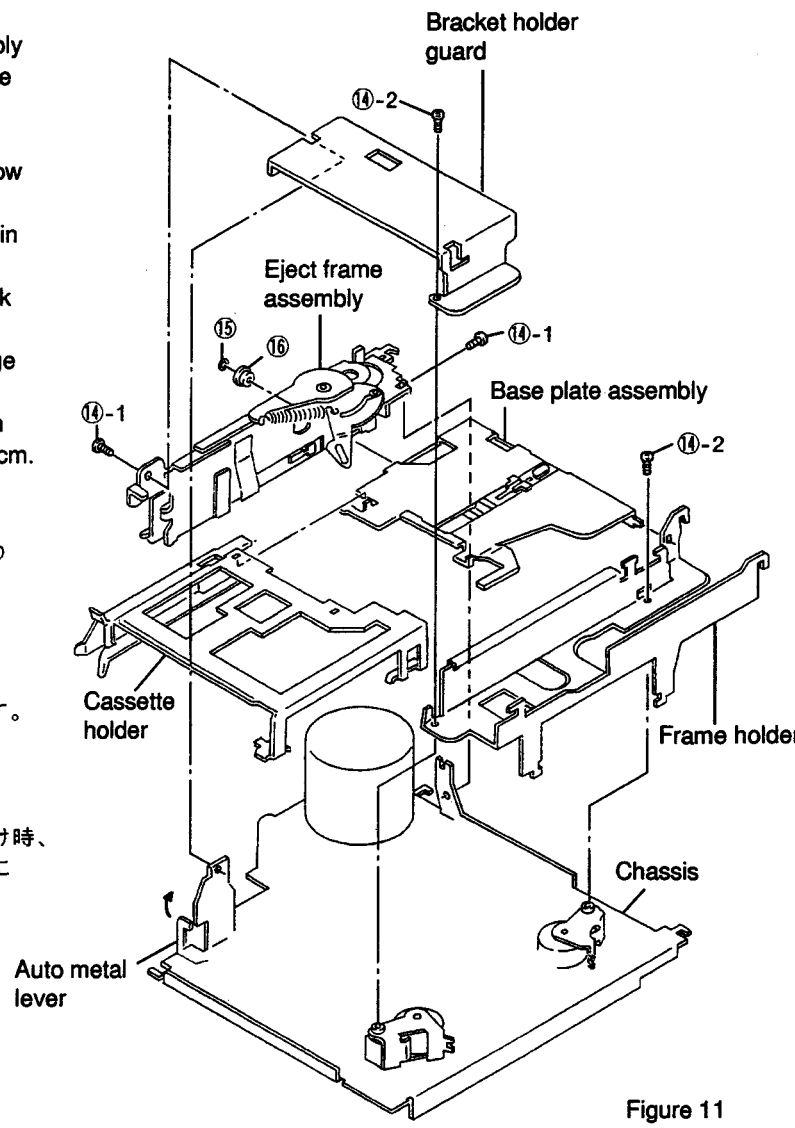


Figure 11

c. Disassembly and assembly of the cassette holder

(1) Remove four screws ⑭ and remove the eject frame assembly and the frame holder as shown in Figure 11.

(2) Remove M1.2 lock washer ⑮ and plate base roller ⑯ and remove the cassette holder and the base plate assembly as shown in Figure 11.

(3) Remount them following the removal steps in the reverse order.

NOTE : ① When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indcated by the arrow in the figure . Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 12)

② When mounting the eject frame assembly, push the auto metal lever in the direction indicated by the arrow in the Figure 11.

③ When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.

④ Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

⑤ Fasten the two screws ⑭-1 with a fastening torque of 6kg.cm. and the two screws ⑭-2 with a fastening torque of 1.5kg.cm.

c. カセットホルダーの分解方法及び組立方法

(1) 4本のネジ⑭を外し、イジェクトフレーム組立及びフレームホルダーを外します。(図11参照)

(2) ロックワッシャー⑮ (M1.2) とプレートベースローラー⑯を外し、カセットホルダーとベースプレート組立を外します。(図11参照)

(3) 分解方法と逆の手順で取り付けます。

[注意] ① カセットホルダーとベースプレート組立を組み立てる際、スライダーのシャフトをイジェクトアームに挿入し、図の様に矢印方向に回しながら取り付けます。この時カセットホルダーとベースプレートはカセットインの状態で行うこと。(図12参照)

② イジェクトフレーム組立をシャーシーに取り付ける際、オートメタルレバーを図の様に矢印方向に押して下さい。(図11参照)

③ ベースプレート組立とイジェクトフレーム組立を取り付ける際、又、シャーシーとイジェクトフレーム組立を取り付ける際は、必要以上の力を加えないで下さい。(イジェクトアーム、フレームの変形防止の為)

④ 一度使用したワッシャーは、使用しないこと。又、口開き、めくれのないこと。

⑤ ネジ⑭-1は6kgcm、⑭-2は1.5kgcmのトルクで締め付けること。

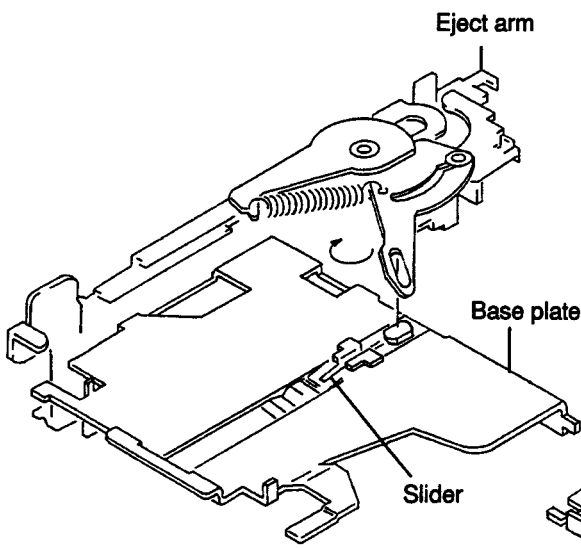


Figure 12

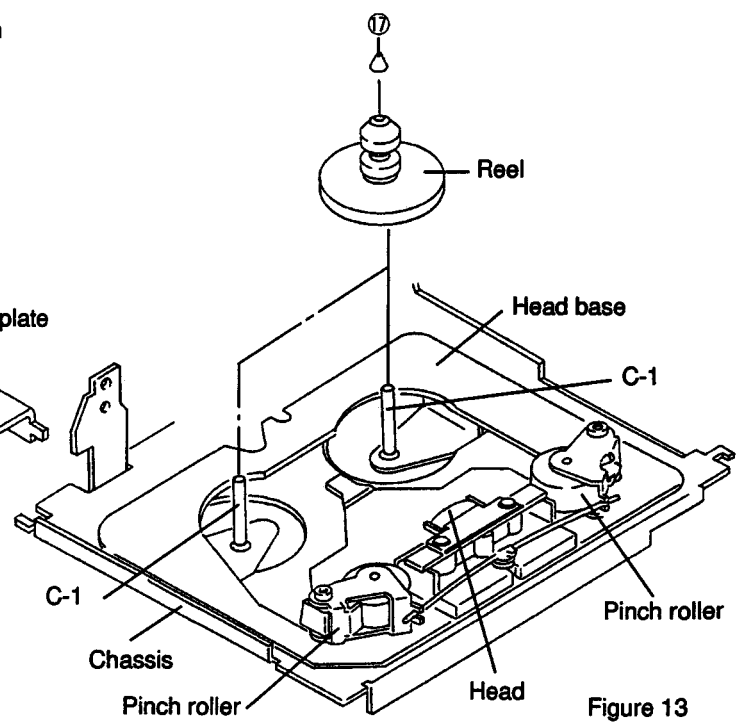


Figure 13

f. Replacement of the head

(1) After removing the pinch roller spring, remove two screws ⑳ as shown in Figure 15.

(2) Remove solder 23 and remove the head from the head P.C.Board as shown in Figure 16.

(3) After replacement, mount the new head following the removal steps in the reverse order.

NOTE : ① When using the soldering iron, set the temperature of the soldering iron to270° ±20℃ and the soldering time to less than 1 second.

② Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damage.

③ Do not bring the soldering iron near the head P.C.Board. Make sure that the head P.C.Board is not lifted.

④ Fasten the two screws with a fastening torque 1kg.cm. Note that the tension of the head spring can be descreased if the screws are fastened too strongly.

(4) Adjust the height of the head as shown in Figure 17, 18 and 19.

(4) -1 Place the height adjustment gauge(AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.

(4) -2 When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t0.1mm or polyslider washer t0.13mm). If necessary, remove the spacer.

NOTE : ① If you do not have a height gauge like described in (4)-1, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

(5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-114NB. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

f. ヘッドの交換方法

(1) ピンチローラースプリングを外した後、2本のネジ⑳を外します。(図15参照)

(2) 半田23を外し、ヘッド基板からヘッドを取り外します。(図16参照)

(3) 良品のヘッドと交換後、取り外し方の逆の手順で取り付けます。

【注意】① 半田ゴテを使用する際、半田ゴテ先温度270° ±20℃、半田付け時間1秒以下とする。

② ルーズ半田、ショート等のないこと。

③ ヘッド基板には、コテ先を当てないこと。又、ヘッド基板に浮きがない様注意すること。

④ 2本のネジは1kgcmのトルクで締め付けること。但し、ネジを締め過ぎるとヘッドバネがヘタり、バネ性がなくなるので注意すること。

(4) ヘッド高さ調整を行います。(図17、18、19参照)

(4) -1 高さゲージ (AI-500) をヘッドベースにのせ、チェック・バーがテープヘッドガイドにスムーズに入る高さに合わせます。

(4) -2 テープガイドの上 (又は下) にチェック・バーが当たる時は、スペーサー (t0.1mm又はポリスライダーワッシャーt0.13mm) を一枚入れます。又は、スペーサーを外すことによって当りをなくす様にします。

[注意]① (4) -1の様に高さゲージがない場合は、テープを通常走行させ、テープカーリングが生じなくなる様に高さ (ヘッド及びテープヘッドガイド) を調整します。

(5) 最終的な1台のメカと言う状態に組み上げた後、テストテープ (MTT-114NB) でヘッドの角度を調整します。(ヘッド角度調整方法の項目を参照して下さい。) 調整後、ネジロックを塗布し、ネジを固定します。

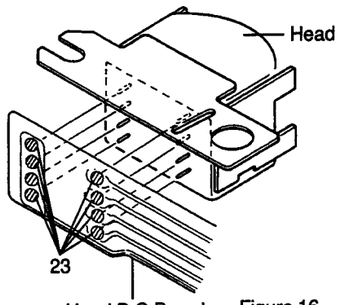


Figure 16

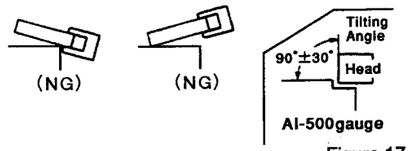


Figure 17

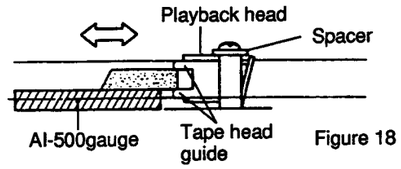


Figure 18

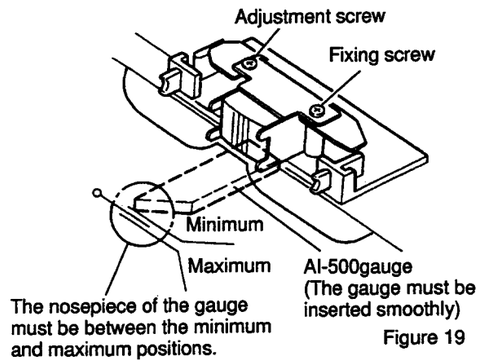


Figure 19

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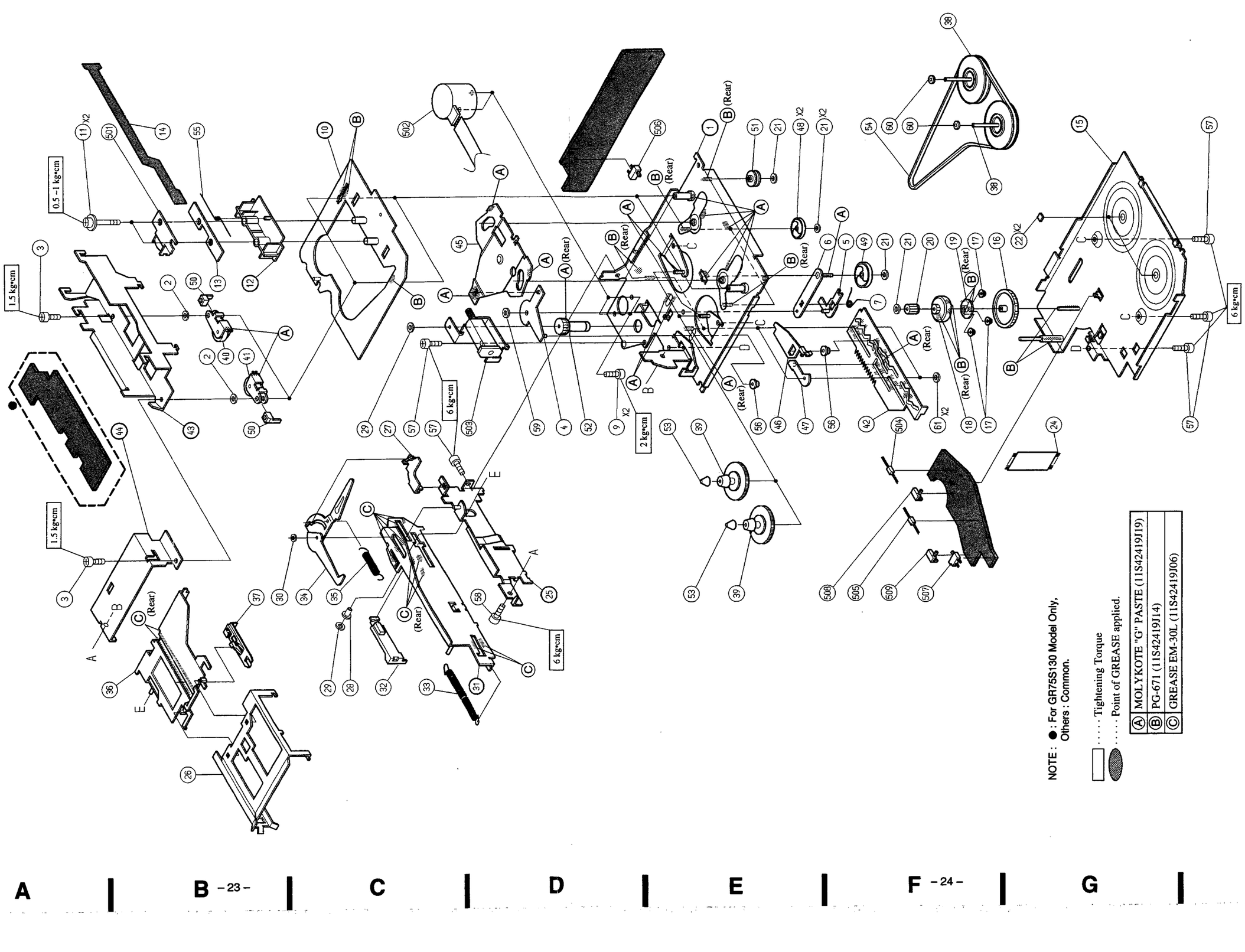
Exploded View (Cassette Deck Mechanism)



Cassette Deck Mechanism Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
2		04B41345P32	Washer, Lock (M3.1)
3		03S43997P63	Screw, Pan (M1.7 ×4)
4	3-D	01A71716W01	Assy., Riv. Select Swing
5	2-F	01A71714W01	Assy., Riv. RF Lever A
6	2-E	01A71715W01	Assy., Riv. RF Lever B
7	2-F	41A71781W01	Spring, RF
9	3-D	03C42723U12	Screw, Cup (M2 ×2.5)
11		03A80452W01	Screw, F Locks (M2 ×10.7)
13	2-B	41A31756W01	Spring, Head
○ 14	2-B	84T45462W01	Head P.C.Board
● 14	2-B	84T25151W01	Head P.C.Board
16	2-G	44A71747W01	Gear, Sun
17		44A71748W01	Gear, Planet
18	3-F	44A71749W01	Gear, Inner
19	2-F	44A71751W01	Pinion, Eject Base
20	2-F	44A71752W01	Pinion, Eject
21		04B41345P11	Washer, Lock (M1.2)
22	2-G	43A41656W01	Spacer, UHMW-PE
24	3-G	30T65174W07	Wire, Flat 10P
26	5-B	07B71778W01	Holder, Cassette
27	3-C	45A71736W01	Lever, Pack In Switch
28	5-C	43A71775W01	Roller, Plate Base
29		04B41345P01	Washer, Lock (M1.2)
30	4-B	04B41345P15	Washer, Lock (M1.2)
32	5-C	44A71753W01	Rack, GR-S
33	5-C	41A80634W01	Spring, Rack
34	4-C	01A71720W01	Assy., Riv. Eject Arm A
35	4-C	41B63283F11	Spring
36	4-A	01A71712W01	Assy., Riv. Plate Base
37	3-B	45B71750W01	Slider
38		01A71783W01	Flywheel
39		01A71784W01	Reel
40	3-B	01B81372W01	Assy., Pinch Roller
41	3-B	01B81372W02	Assy., Pinch Roller
42	3-F	44B71726W01	Rack, Mode
45	2-C	45B71729W01	Lever, Select
46	3-E	45A71737W01	Lever, Mode Switch
47	3-E	45A71733W01	Lever, Lock
48	2-E	44A71741W01	Gear, Take Up
49	2-F	44A71742W01	Gear, RF
50		43A71743W01	Guide, Pack
51	2-E	49A71744W01	Pulley, Idler
52	3-D	44A71746W01	Pinion, Motor
53		49A71003W01	Reel, Cap
54	2-F	42A71780W01	Belt
55	2-B	41A10387W01	Spring, Pinch Roller
56		43A71774W01	Roller, Mode
57		03S44205G30	Screw, Pan (M2.6 ×4)
58	4-D	03A80629W01	Screw, Special (M2.6 ×6)
59	3-D	04B41345P02	Washer, Lock (M1.7)
60	2-F	04S40075G05	Washer, Polyslider (M2.1)
● or 61	2-F / 3-F	04T55449W01 / 04B41345P13	Washer, Teflon / Washer, Lock (M1.7)

Miscellaneous

Symbol No.	Index	Part No.	Description
501	2-A	88T75612W01	Head
○ 502	2-C	01V74500W16	Assy., Main Motor (13.2V-55mA)
● 502	2-C	01V84200W63	Assy., Main Motor (6V-90mA)
503	3-D	01V74500W23	Assy., Sub Motor (7V-370mA)
504	3-F	51T63433F03	Sensor, Photo ON2170-R2
505	4-F	51T63433F03	Sensor, Photo ON2170-R2
506	2-D	40T15222W01	Switch, Detector (PACK IN)
507	4-F	40T15382W02	Switch, Detector (PAUSE)
508	4-F	40T15382W02	Switch, Detector (MODE)
509	4-F	40T15382W02	Switch, Detector (METAL)

NOTE : ○: For GR75S120 Model Only, ●: For GR75S130 Model Only, Others : Common.

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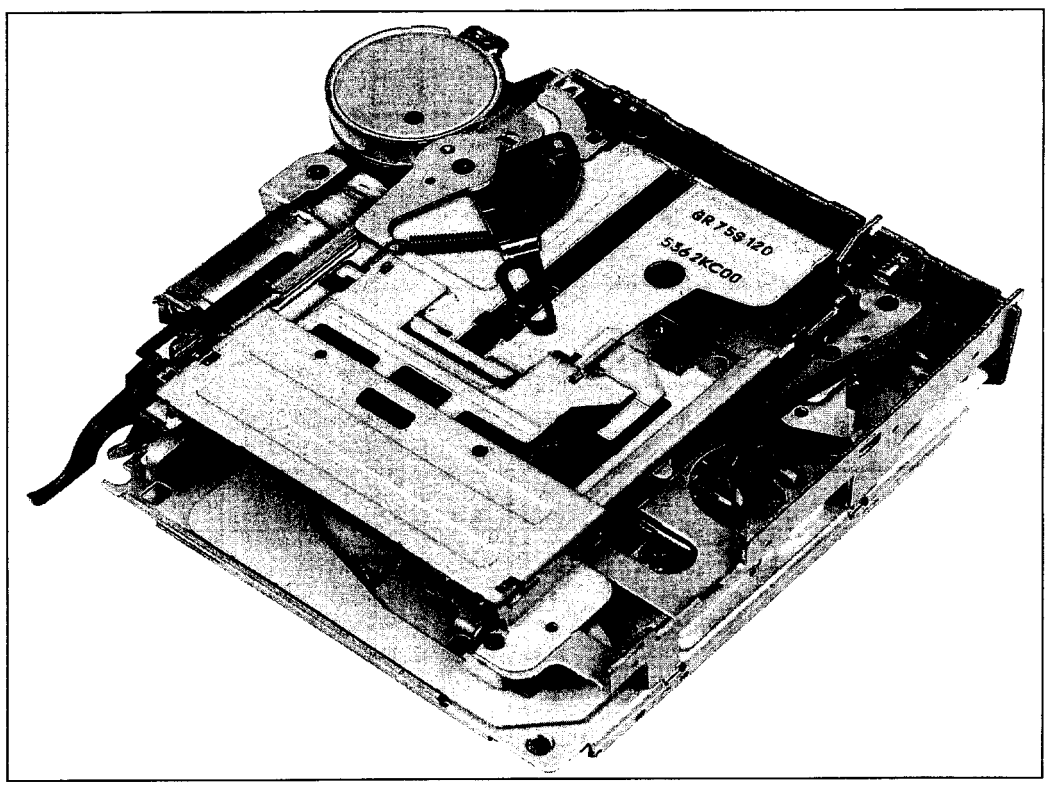
SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED

- This manual is described on GR75S310 only. The GR75S310 is developed from GR-S SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR-S SERIES (68E23241S01).
- 当マニュアルはGR75S310についてのみ記載しております。又、GR-S SERIESがベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはGR-S SERIES (68E23241S01) を参照願います。



GR-S SERIES

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Basic Operation of GR-S Mechanism
Disassembly, Assembly and Replacement of Function Parts
Refer to the Service Manual · GR-S SERIES (Part No. 68E23241S01).

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Cassette Deck Mechanism Assembly Parts List

NOTE: The parts is not mentioned, refer to the Service Manual · DR-S SERIES (Part No.68E23241S01).

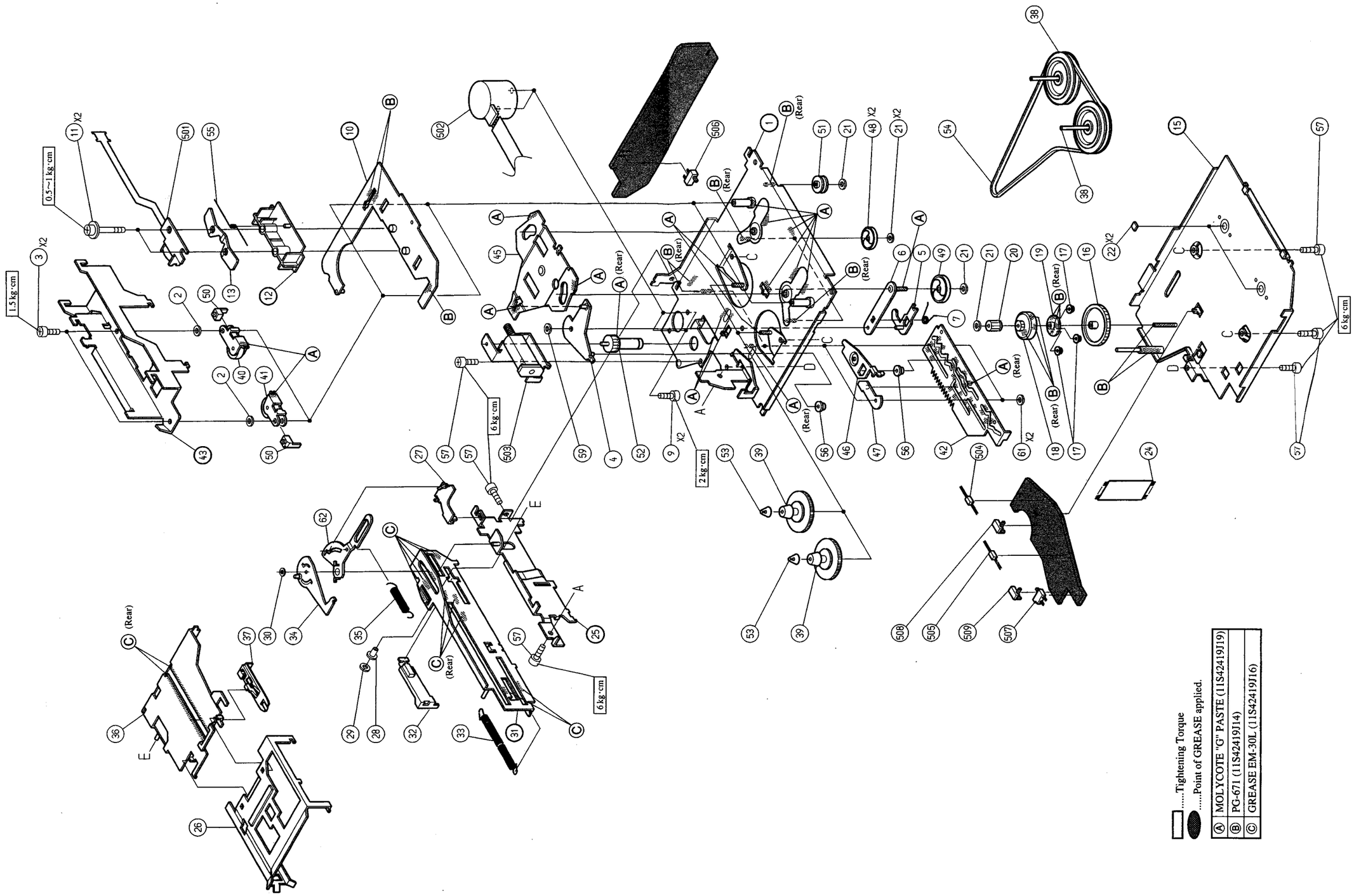
Symbol No.	Index	Part No.	Description
4	3-D	01A90342W01	Assy., Riv. Select Swing
5	2-F	01A90340W01	Assy., Riv. RF Lever A
6	2-F	01A90341W01	Assy., Riv. RF Lever B
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)
13	2-B	41A31756W02	Spring, Head
26	5-B	07B40012W02	Holder, Cassette
27	3-C	45A71736W02	Lever, Pack In Switch
34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)
36	4-A	01A90338W01	Assy., Riv. Plate Base
38		01A90350W01	Assy., Flywheel
40	3-B	01B30863W01	Assy., Pinch Roller
41	3-B	01B30863W02	Assy., Pinch Roller
42	3-F	44B90318W01	Rack, Mode
45	2-C	45B90320W01	Lever, Select
46	3-E	45A71737W02	Lever, Mode Switch
47	3-E	45A71733W02	Lever, Lock
53		49A81855W01	Reel, Cap
54	2-F	42A71780W02	Belt
55	2-B	41A10387W02	Spring, Pinch Roller
62	3-B	45A90322W01	Lever, Eject Arm A
Miscellaneous			
501	2-B	88T95215W02	Head
503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)

カセットデッキメカニズム関係部品表

※ 記載されていない部品については、サービスマニュアル・GR-S SERIES (68E23241S01) を参照願います。

記号	索引	部品番号	部品名	標準卸価格
4	3-D	01A90342W01	Assy., Riv. Select Swing	—
5	2-F	01A90340W01	Assy., Riv. RF Lever A	—
6	2-F	01A90341W01	Assy., Riv. RF Lever B	—
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	45
13	2-B	41A31756W02	Spring, Head	60
26	5-B	07B40012W02	Holder, Cassette	260
27	3-C	45A71736W02	Lever, Pack In Switch	—
34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)	—
36	4-A	01A90338W01	Assy., Riv. Plate Base	—
38		01A90350W01	Assy., Flywheel	—
40	3-B	01B30863W01	Assy., Pinch Roller	240
41	3-B	01B30863W02	Assy., Pinch Roller	240
42	3-F	44B90318W01	Rack, Mode	—
45	2-C	45B90320W01	Lever, Select	—
46	3-E	45A71737W02	Lever, Mode Switch	—
47	3-E	45A71733W02	Lever, Lock	—
53		49A81855W01	Reel, Cap	45
54	2-F	42A71780W02	Belt	—
55	2-B	41A10387W02	Spring, Pinch Roller	—
62	3-B	45A90322W01	Lever, Eject Arm A	—
その他の電気部品				
501	2-B	88T95215W02	Head	1,210
503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)	1,440

Exploded View (Cassette Deck Mechanism)



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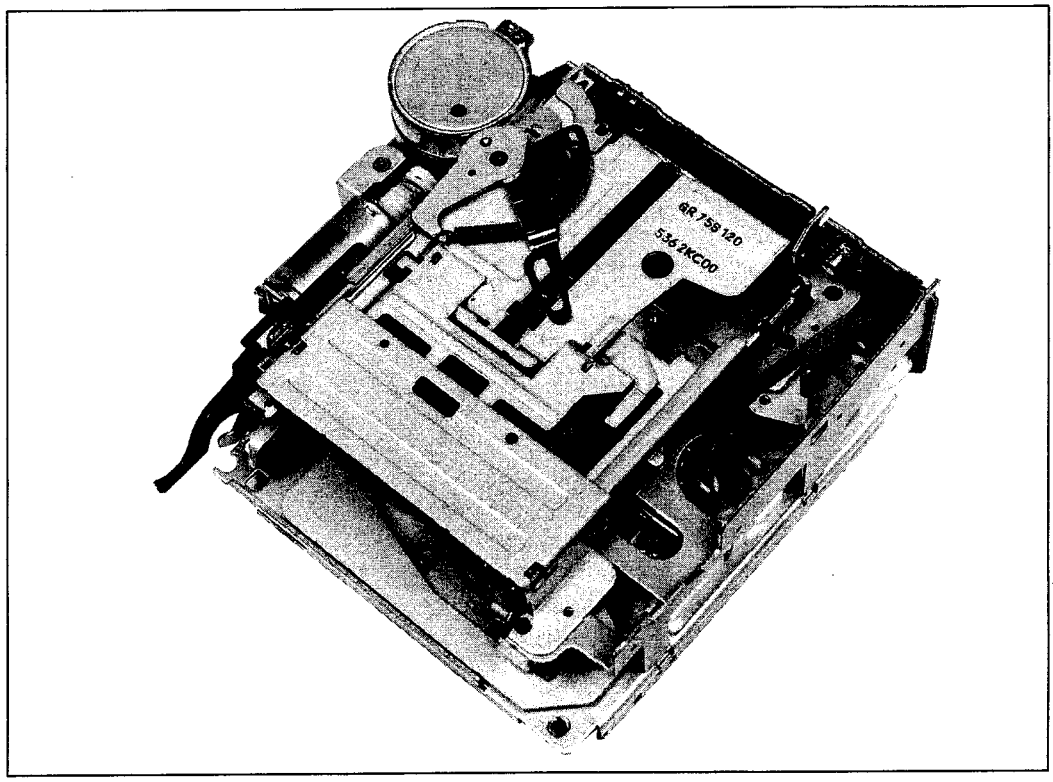
ALPINE®

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (II)

- This manual is described on GR75S410/42Y only. The GR75S410/42Y is developed from GR-S SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR-S SERIES (68E23241S01).
- 当マニュアルはGR75S410/42Yについてのみ記載しております。又、GR-S SERIESがベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはGR-S SERIES (68E23241S01) を参照願います。



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Basic Operation of GR-S Mechanism
Disassembly, Assembly and Replacement of Function Parts

Refer to the Service Manual · GR-S SERIES (Part No. 68E23241S01).

NOTE: Due to continuing product improvement, specifications and designs are subject to change without notice.

Cassette Deck Mechanism Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.		Index	Part No.	Description
	2		04B41345P32	Washer, Lock (M3.1)
	3		03S43997P63	Screw, Pan (M1.7X4)
	4	3-D	01A90342W02	Assy., Riv. Select Swing
	5	2-F	01A71714W01	Assy., Riv. RF Lever A
	6	2-E	01A90341W02	Assy., Riv. RF Lever B
	7	2-F	41A71781W01	Spring, RF
	9	3-D	03C42723U12	Screw, Cup (M2X2.5)
	11	2-A	03A80452W02	Screw, F Locks (M2X10.7)
	13	2-B	41A31756W01	Spring, Head
	16	2-F	44A71747W01	Gear, Sun
	17		44A71748W01	Gear, Planet
	18	3-F	44A71749W01	Gear, Inner
	19	2-F	44A71751W01	Pinion, Eject Base
	20	2-F	44A71752W01	Pinion, Eject
	21		04B41345P11	Washer, Lock (M1.2)
	22	2-G	43A41656W01	Spacer, UHMW-PE
	24	3-G	30T65174W07	Wire, Flat 10P
	26	5-B	07B71778W01	Holder, Cassette
	27	3-C	45A71736W03	Lever, Pack In Switch
	28	4-C	43A71775W01	Roller, Plate Base
	29	4-C	04B41345P01	Washer, Lock (M1.2)
	30	4-B	04B41345P15	Washer, Lock (M1.2)
	32	4-C	44A71753W01	Rack, GR-S
	33	4-C	41A80634W01	Spring, Rack
	34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)
	35	4-C	41B63283F11	Spring
	36	4-A	01A71712W01	Assy., Riv. Plate Base
	37	4-B	45B71750W01	Slider
○	38		01A90350W01	Assy., Flywheel
●	38		01A71783W10	Assy., Flywheel
	39		01A71784W01	Reel
	40	3-B	01B30863W01	Assy., Pinch Roller
	41	3-B	01B30863W02	Assy., Pinch Roller
	42	3-F	44B71726W01	Rack, Mode
	45	2-C	45B90320W02	Lever, Select
	46	3-E	45A71737W03	Lever, Mode Switch
	47	3-E	45A71733W03	Lever, Lock
	48	2-E	44A71741W01	Gear, Take Up
	49	2-F	44A71742W01	Gear, RF
	50		43A71743W01	Guide, Pack
	51	2-E	49A71744W01	Pulley, Idler
	52	3-D	44A71746W01	Pinion, Motor
	53		49A81855W01	Reel, Cap
	54	2-F	42A71780W02	Belt
	55	2-B	41A10387W02	Spring, Pinch Roller
	56	3-E	43A71774W01	Roller, Mode

Symbol No.		Index	Part No.	Description
	57		03S44205G30	Screw, Pan (M2.6X4)
●	58	4-D	03A80629W01	Screw, Special (M2.6X6)
	59	3-D	04B41345P02	Washer, Lock (M1.7)
●	60	2-F	04S40075G05	Washer, Polyslider (M2.1)
●	or	2-F	04T55449W01	Washer, Polyslider (M2.1)
	61	3-F	04B41345P23	Washer, Lock (M1.7)
	62	3-B	45A90322W02	Lever, Eject Arm A

Miscellaneous

○	501	2-B	88T95215W02	Head
●	501	2-B	88T75612W03	Head
○	502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)
●	502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)
	503	3-C	01V74500W23	Assy., Sub Motor (7V-370mA)
	504	3-F	51T63433F03	Sensor, Photo ON2170-R2
	505	4-F	51T63433F03	Sensor, Photo ON2170-R2
	506	2-D	40T15222W01	Switch, Detector (PACK IN)
	507	4-F	40T15382W02	Switch, Detector (PAUSE)
	508	4-E	40T15382W02	Switch, Detector (MODE)
	509	4-F	40T15382W02	Switch, Detector (METAL)

NOTE : ○: For GR75S410 Model Only, ●: For GR75S42Y Model Only, Others : Common.

カセットデッキメカニズム関係部品表

※ 部品表に記入されていない部品は供給されません。

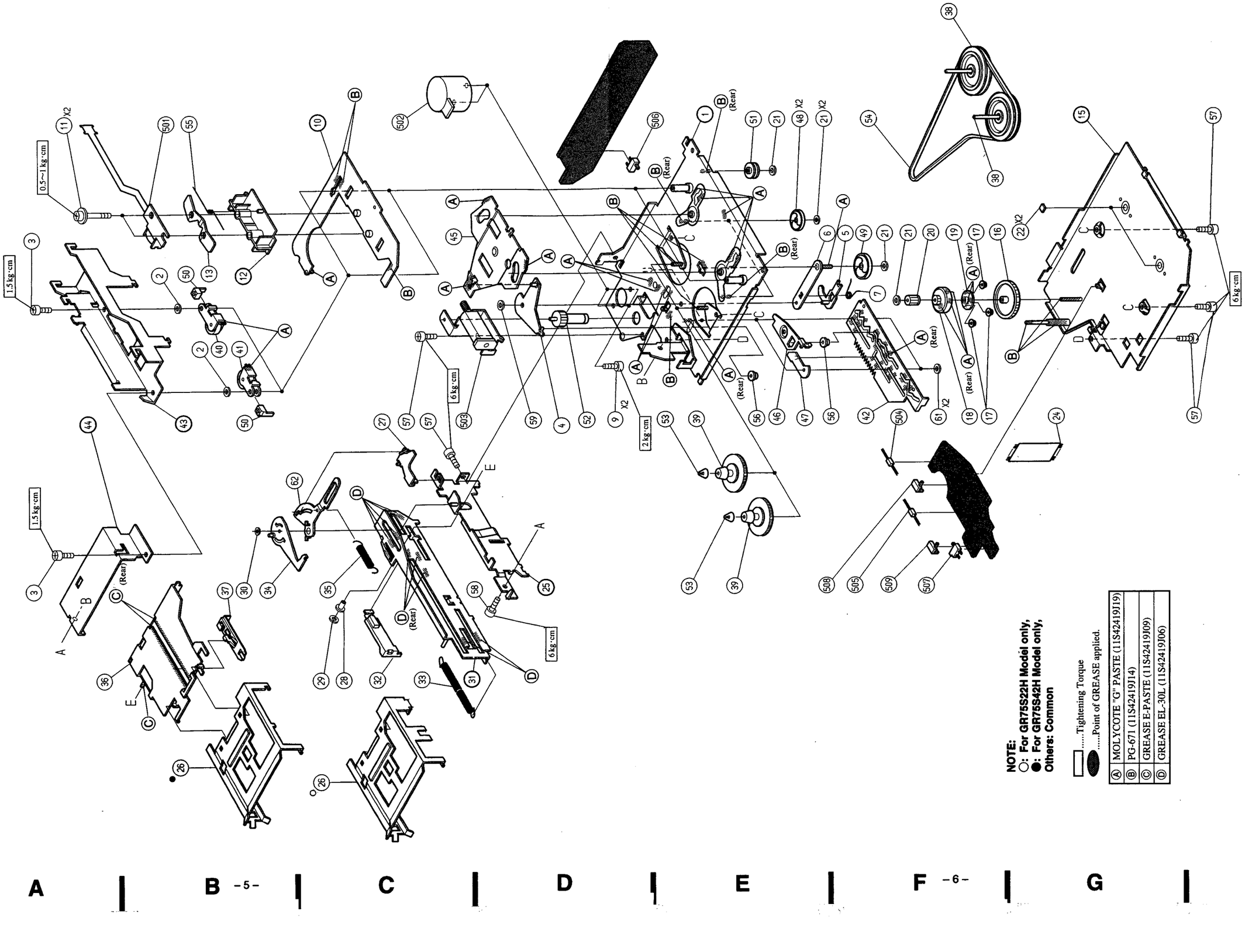
記号	索引	部品番号	部品名	標準卸価格
	2	04B41345P32	Washer, Lock (M3.1)	45
	3	03S43997P63	Screw, Pan (M1.7X4)	45
	4	3-D 01A90342W02	Assy., Riv. Select Swing	—
	5	2-F 01A71714W01	Assy., Riv. RF Lever A	120
	6	2-E 01A90341W02	Assy., Riv. RF Lever B	—
	7	2-F 41A71781W01	Spring, RF	45
	9	3-D 03C42723U12	Screw, Cup (M2X2.5)	45
	11	2-A 03A80452W02	Screw, F Locks (M2X10.7)	45
	13	2-B 41A31756W01	Spring, Head	60
	16	2-F 44A71747W01	Gear, Sun	50
	17	44A71748W01	Gear, Planet	45
	18	3-F 44A71749W01	Gear, Inner	—
	19	2-F 44A71751W01	Pinion, Eject Base	100
	20	2-F 44A71752W01	Pinion, Eject	90
	21	04B41345P11	Washer, Lock (M1.2)	45
	22	2-G 43A41656W01	Spacer, UHMW-PE	45
	24	3-G 30T65174W07	Wire, Flat 10P	160
	26	5-B 07B71778W01	Holder, Cassette	240
	27	3-C 45A71736W03	Lever, Pack In Switch	—
	28	4-C 43A71775W01	Roller, Plate Base	50
	29	4-C 04B41345P01	Washer, Lock (M1.2)	45
	30	4-B 04B41345P15	Washer, Lock (M1.2)	45
	32	4-C 44A71753W01	Rack, GR-S	130
	33	4-C 41A80634W01	Spring, Rack	80
	34	4-B 01A90346W02	Assy., Riv. Eject Arm (B)	—
	35	4-C 41B63283F11	Spring	45
	36	4-A 01A71712W01	Assy., Riv. Plate Base	260
	37	4-B 45B71750W01	Slider	45
○	38	01A90350W01	Assy., Flywheel	380
●	38	01A71783W10	Assy., Flywheel	450
	39	01A71784W01	Reel	370
	40	3-B 01B30863W01	Assy., Pinch Roller	240
	41	3-B 01B30863W02	Assy., Pinch Roller	240
	42	3-F 44B71726W01	Rack, Mode	120
	45	2-C 45B90320W02	Lever, Select	—
	46	3-E 45A71737W03	Lever, Mode Switch	—
	47	3-E 45A71733W03	Lever, Lock	—
	48	2-E 44A71741W01	Gear, Take Up	45
	49	2-F 44A71742W01	Gear, RF	45
	50	43A71743W01	Guide, Pack	45
	51	2-E 49A71744W01	Pulley, Idler	45
	52	3-D 44A71746W01	Pinion, Motor	60
	53	49A81855W01	Reel, Cap	45
	54	2-F 42A71780W02	Belt	140
	55	2-B 41A10387W02	Spring, Pinch Roller	45
	56	3-E 43A71774W01	Roller, Mode	50
	57	03S44205G30	Screw, Pan (M2.6X4)	45
●	58	4-D 03A80629W01	Screw, Special (M2.6X6)	50
	59	3-D 04B41345P02	Washer, Lock (M1.7)	45
●	60	2-F 04S40075G05	Washer, Polyslider (M2.1)	45
●	or	2-F 04T55449W01	Washer, Polyslider (M2.1)	45
	61	3-F 04B41345P23	Washer, Lock (M1.7)	45
	62	3-B 45A90322W02	Lever, Eject Arm A	—

その他の電気部品

記号	索引	部品番号	部品名	標準卸価格
○	501	2-B 88T95215W02	Head	1,210
●	501	2-B 88T75612W03	Head	1,240
○	502	2-C 01V94900W74	Assy., Main Motor (13.2V-95mA)	1,460
●	502	2-C 01V74500W16	Assy., Main Motor (13.2V-95mA)	1,480
	503	3-C 01V74500W23	Assy., Sub Motor (7V-370mA)	1,500
	504	3-F 51T63433F03	Sensor, Photo ON2170-R2	310
	505	4-F 51T63433F03	Sensor, Photo ON2170-R2	310
	506	2-D 40T15222W01	Switch, Detector (PACK IN)	130
	507	4-F 40T15382W02	Switch, Detector (PAUSE)	130
	508	4-E 40T15382W02	Switch, Detector (MODE)	130
	509	4-F 40T15382W02	Switch, Detector (METAL)	130

注記 ：○：GR75S410 モデル専用, ●：GR75S42Y モデル専用, その他：共通

Exploded View (Cassette Deck Mechanism)



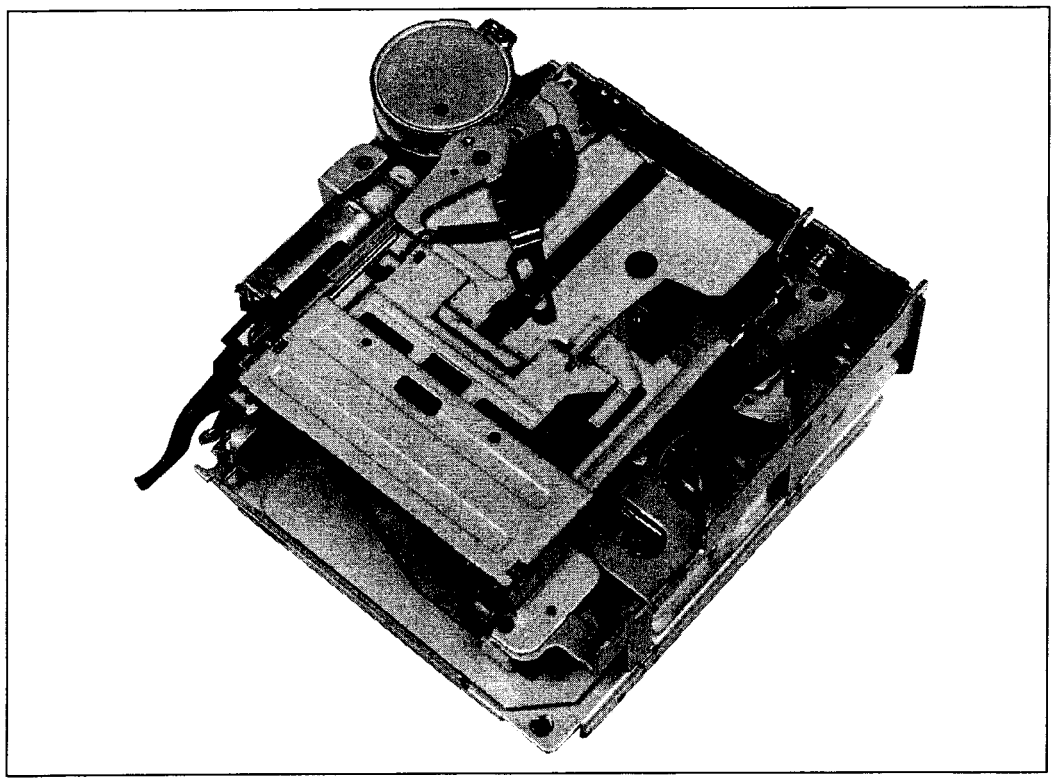
ALPINE®

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (III)

- This manual is described on GR75S22H/42H only. The GR75S22H/42H is developed from GR-S SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR-S SERIES (68E26177S01).
- 当マニュアルはGR75S22H/42Hについてのみ記載しております。又、GR-S SERIESがベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはGR-S SERIES (68E26177S01) を参照願います。



GR-S SERIES

Contents

Cassette Deck Mechanism Assembly Parts List ..... 3 to 4
Exploded View (Cassette Deck Mechanism) ..... 5 to 6

Basic Operation of GR-S Mechanism
Disassembly, Assembly and Replacement of Function Parts

Refer to the Service Manual · GR-S SERIES (Part No. 68E23241S01).

NOTE: Due to continuing product improvement, specifications and designs are subject to change without notice.

Cassette Deck Mechanism Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.		Index	Part No.	Description
	2		04B41345P32	Washer, Lock (M3.1)
	3		03S43997P63	Screw, Pan (M1.7X4)
○	4	3-D	01A90342W01	Assy., Riv. Select Swing
●	4	3-D	01A90342W02	Assy., Riv. Select Swing
○	5	2-F	01A90340W01	Assy., Riv. RF Lever A
●	5	2-F	01A71714W01	Assy., Riv. RF Lever A
○	6	2-E	01A90341W01	Assy., Riv. RF Lever B
●	6	2-E	01A90341W02	Assy., Riv. RF Lever B
	7	2-F	41A71781W01	Spring, RF
	9	3-D	03C42723U12	Screw, Cup (M2X2.5)
	11	2-A	03A80452W02	Screw, F Locks (M2X10.7)
	13	2-B	41A31756W01	Spring, Head
	16	2-F	44A71747W01	Gear, Sun
	17		44A71748W01	Gear, Planet
	18	3-F	44A71749W01	Gear, Inner
	19	2-F	44A71751W01	Pinion, Eject Base
	20	2-F	44A71752W01	Pinion, Eject
	21		04B41345P11	Washer, Lock (M1.2)
	22	2-G	43A41656W01	Spacer, UHMW-PE
	24	3-G	30T65174W07	Wire, Flat 10P
○	26	5-C	07B40012W01	Holder, Cassette
●	26	5-B	07B71778W01	Holder, Cassette
○	27	3-C	45A71736W02	Lever, Pack In Switch
●	27	3-C	45A71736W03	Lever, Pack In Switch
	28	4-C	43A71775W01	Roller, Plate Base
	29	4-C	04B41345P01	Washer, Lock (M1.2)
	30	4-B	04B41345P15	Washer, Lock (M1.2)
	32	4-C	44A71753W01	Rack, GR-S
	33	4-C	41A80634W01	Spring, Rack
○	34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)
●	34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)
	35	4-C	41B63283F11	Spring
○	36	4-A	01A40024W03	Assy., Riv. Plate Base
●	36	4-A	01A71712W01	Assy., Riv. Plate Base
	37	4-B	45B71750W01	Slider
	38		01A90350W01	Assy., Flywheel
	39		01A71784W01	Reel
	40	3-B	01B30863W01	Assy., Pinch Roller
	41	3-B	01B30863W02	Assy., Pinch Roller
○	42	3-F	44B90318W01	Rack, Mode B
●	42	3-F	44B71726W01	Rack, Mode
○	45	2-C	45B90320W01	Lever, Select
●	45	2-C	45B90320W02	Lever, Select
○	46	3-E	45A71737W02	Lever, Mode Switch
●	46	3-E	45A71737W03	Lever, Mode Switch
○	47	3-E	45A71733W02	Lever, Lock
●	47	3-E	45A71733W03	Lever, Lock
	48	2-E	44A71741W01	Gear, Take Up
	49	2-F	44A71742W01	Gear, RF
	50		43A71743W01	Guide, Pack
	51	2-E	49A71744W01	Pulley, Idler
	52	3-D	44A71746W01	Pinion, Motor
	53		49A81855W01	Reel, Cap
	54	2-F	42A71780W02	Belt
	55	2-B	41A10387W02	Spring, Pinch Roller
	56		43A71774W01	Roller, Mode
	57		03S44205G30	Screw, Pan (M2.6X4)
	58	4-D	03A80629W01	Screw, Special (M2.6X6)
	59	3-D	04B41345P02	Washer, Lock (M1.7)
	61	3-F	04B41345P23	Washer, Lock (M1.7)
○	62	3-B	45A90322W01	Lever, Eject Arm A
●	62	3-B	45A90322W02	Lever, Eject Arm A

Miscellaneous

	501	2-B	88T75612W03	Head
○	502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)
●	502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)
○	503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)
●	503	3-C	01V11700Y92	Assy., Sub Motor (7V-370mA)
	504	3-F	51T63433F03	Sensor, Photo ON2170-R2
	505	4-F	51T63433F03	Sensor, Photo ON2170-R2
	506	2-D	40T15222W01	Switch, Detector (PACK IN)
	507	4-F	40T15382W02	Switch, Detector (PAUSE)
	508	4-E	40T15382W02	Switch, Detector (MODE)
	509	4-F	40T15382W02	Switch, Detector (METAL)

NOTE : ○: For GR75S22H Model Only, ●: For GR75S42H Model Only, Others : Common.

カセット・デッキ・メカニズム関係部品表

※ 部品表に記入されていない部品は供給されません。

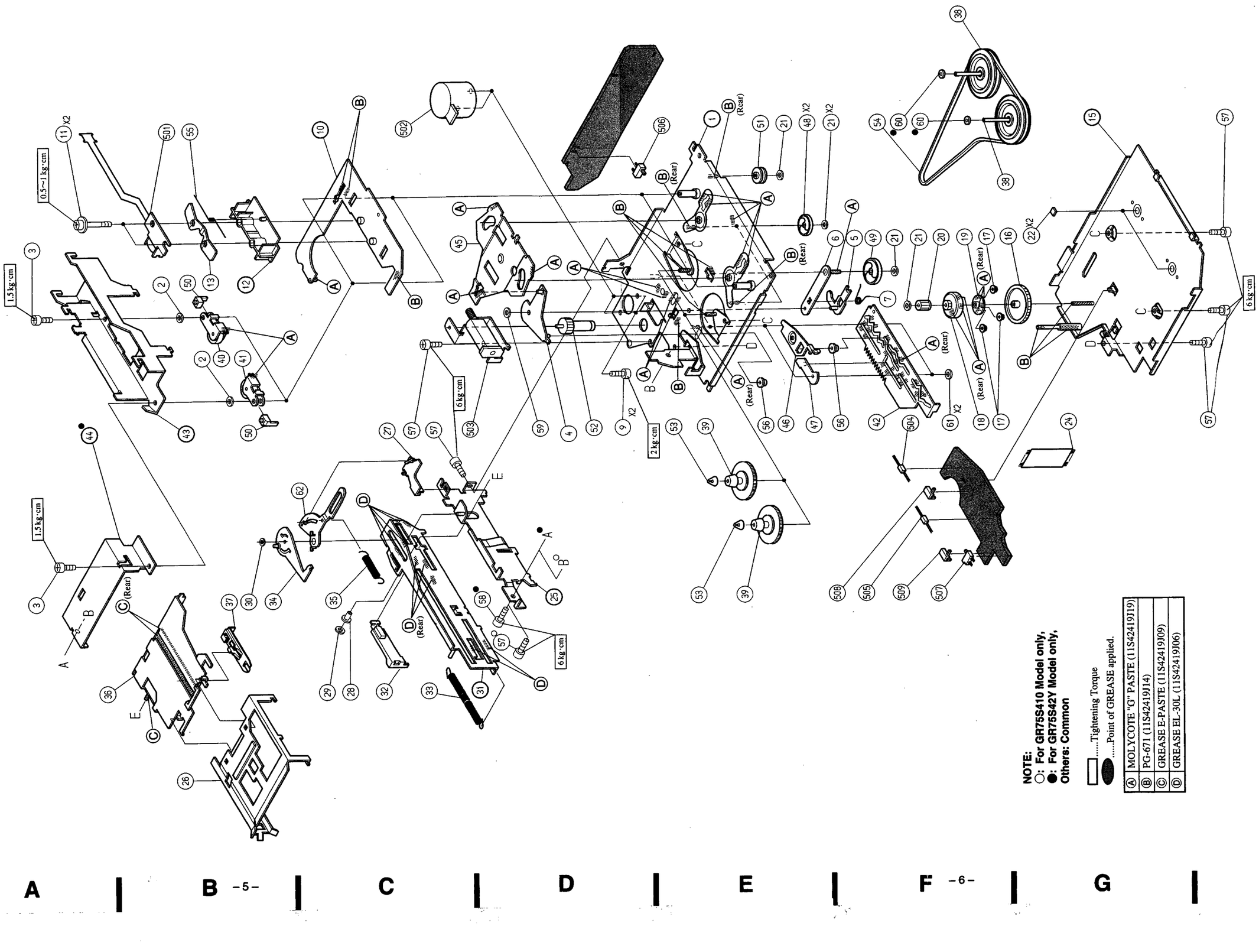
記号		索引	部品番号	部品名	標準卸価格
	2		04B41345P32	Washer, Lock (M3.1)	45
	3		03S43997P63	Screw, Pan (M1.7X4)	45
○	4	3-D	01A90342W01	Assy., Riv. Select Swing	—
●	4	3-D	01A90342W02	Assy., Riv. Select Swing	—
○	5	2-F	01A90340W01	Assy., Riv. RF Lever A	160
●	5	2-F	01A71714W01	Assy., Riv. RF Lever A	120
○	6	2-E	01A90341W01	Assy., Riv. RF Lever B	—
●	6	2-E	01A90341W02	Assy., Riv. RF Lever B	—
	7	2-F	41A71781W01	Spring, RF	45
	9	3-D	03C42723U12	Screw, Cup (M2X2.5)	45
	11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	45
	13	2-B	41A31756W01	Spring, Head	60
	16	2-F	44A71747W01	Gear, Sun	50
	17		44A71748W01	Gear, Planet	45
	18	3-F	44A71749W01	Gear, Inner	—
	19	2-F	44A71751W01	Pinion, Eject Base	100
	20	2-F	44A71752W01	Pinion, Eject	90
	21		04B41345P11	Washer, Lock (M1.2)	45
	22	2-G	43A41656W01	Spacer, UHMW-PE	45
	24	3-G	30T65174W07	Wire, Flat 10P	160
○	26	5-C	07B40012W01	Holder, Cassette	280
●	26	5-B	07B71778W01	Holder, Cassette	240
○	27	3-C	45A71736W02	Lever, Pack In Switch	—
●	27	3-C	45A71736W03	Lever, Pack In Switch	—
	28	4-C	43A71775W01	Roller, Plate Base	50
	29	4-C	04B41345P01	Washer, Lock (M1.2)	45
	30	4-B	04B41345P15	Washer, Lock (M1.2)	45
	32	4-C	44A71753W01	Rack, GR-S	130
	33	4-C	41A80634W01	Spring, Rack	80
○	34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)	—
●	34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)	—
	35	4-C	41B63283F11	Spring	45
○	36	4-A	01A40024W03	Assy., Riv. Plate Base	240
●	36	4-A	01A71712W01	Assy., Riv. Plate Base	260
	37	4-B	45B71750W01	Slider	45
	38		01A90350W01	Assy., Flywheel	380
	39		01A71784W01	Reel	370
	40	3-B	01B30863W01	Assy., Pinch Roller	240
	41	3-B	01B30863W02	Assy., Pinch Roller	240
○	42	3-F	44B90318W01	Rack, Mode B	160
●	42	3-F	44B71726W01	Rack, Mode	120
○	45	2-C	45B90320W01	Lever, Select	—
●	45	2-C	45B90320W02	Lever, Select	—
○	46	3-E	45A71737W02	Lever, Mode Switch	—
●	46	3-E	45A71737W03	Lever, Mode Switch	—
○	47	3-E	45A71733W02	Lever, Lock	—
●	47	3-E	45A71733W03	Lever, Lock	—
	48	2-E	44A71741W01	Gear, Take Up	45
	49	2-F	44A71742W01	Gear, RF	45
	50		43A71743W01	Guide, Pack	45
	51	2-E	49A71744W01	Pulley, Idler	45
	52	3-D	44A71746W01	Pinion, Motor	60
	53		49A81855W01	Reel, Cap	45
	54	2-F	42A71780W02	Belt	140
	55	2-B	41A10387W02	Spring, Pinch Roller	45
	56		43A71774W01	Roller, Mode	50
	57		03S44205G30	Screw, Pan (M2.6X4)	45
	58	4-D	03A80629W01	Screw, Special (M2.6X6)	50
	59	3-D	04B41345P02	Washer, Lock (M1.7)	45
	61	3-F	04B41345P23	Washer, Lock (M1.7)	45
○	62	3-B	45A90322W01	Lever, Eject Arm A	—
●	62	3-B	45A90322W02	Lever, Eject Arm A	—

その他の電気部品

	501	2-B	88T75612W03	Head	1,240
○	502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)	1,460
●	502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)	1,480
○	503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)	1,440
●	503	3-C	01V11700Y92	Assy., Sub Motor (7V-370mA)	1,460
	504	3-F	51T63433F03	Sensor, Photo ON2170-R2	310
	505	4-F	51T63433F03	Sensor, Photo ON2170-R2	310
	506	2-D	40T15222W01	Switch, Detector (PACK IN)	130
	507	4-F	40T15382W02	Switch, Detector (PAUSE)	130
	508	4-E	40T15382W02	Switch, Detector (MODE)	130
	509	4-F	40T15382W02	Switch, Detector (METAL)	130

注記：○：GR75S22Hモデル専用，　●：GR75S42Hモデル専用，　その他：共通

Exploded View (Cassette Deck Mechanism)



NOTE:
○: For GR75S410 Model only,
●: For GR75S42Y Model only,
Others: Common

.....Tightening Torque
.....Point of GREASE applied.

Ⓐ	MOLYCOTE "G" PASTE (11S42419J19)
Ⓑ	PG-671 (11S42419J14)
Ⓒ	GREASE E-PASTE (11S42419J09)
Ⓓ	GREASE EL-30L (11S42419J06)